

Supplementary Material

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Immune modulating proteins identified from exosomal samples

(see Table 1)

Aminopeptidase-N (ANPEP) serves as an *E. coli* fimbrial receptor,¹ and functions as a viral receptor.²

Transferrin similarly sequesters iron and destabilises bacterial membranes,³ though not at as acidic a pH as lactoferrin.⁴

LGALS3BP is present in breast milk and protects neonates from diarrhoeal illness, may protect against viral invasion, and is implicated in NK cell-mediated immunity.⁵

TRIM5 is involved in viral sensing and restricts retroviral infection.^{6, 7}

CARD9 is indispensable for fungal innate and acquired fungal immunity, and its deficiency results in mucosal and systemic candidiasis.⁸

IFIT5 is highly conserved across species and reduces viral replication and mediates host antiviral defense,⁹ likely through direct binding of viral RNA.¹⁰

PIGR is a key mediator of mucosal immunity. Synthesised in epithelia, it binds basolateral IgA, is transcytosed to the apical surface where it is either expressed with bound IgA, or cleaved as "secretory component" which served to mediate IgA action in host defense.¹¹

Neprilysin (also known as CD10 or CALLA) is an endopeptidase expressed on neutrophils and lymphocytes, and is also highly expressed in kidney. It regulates levels of inflammatory peptides induced during infection with *E. coli*.¹² The homologue in *Manduca sexta* (Q86RS4) is implicated in the immune response to bacterial infection.¹³

Keratin 10 is a cytoskeletal protein that is widely expressed. In epithelia, *Staphylococcus aureus* adheres to the cell surface by binding to surface-expressed keratin 10 through the *S. aureus* clumping factor B (ClfB).¹⁴

Calprotectin (S100A8/A9) is a heterotetramer consisting of S100A8 and S100A9. It inhibits growth and kills gram positive and gram-negative bacteria, and *Candida albicans*.^{15, 16}

Lysozyme C is microbicidal against gram-positive and -negative bacteria and *Candida albicans*, inducing lysis of gram-negative bacteria by destabilising the outer membrane and forming pores in the inner membrane.¹⁷

MASP2 is a mannan-binding lectin associated serine protease that is important for activation of the complement pathway. Deficiency in MASP2 is permissive to pneumococcal infection.¹⁹ Polymorphisms in the MASP2 gene are associated with HTLV-1 infection.²⁰

Mucin-1 is widely expressed in epithelia. It binds to the surfaces of *Pseudomonas aeruginosa* and *E. coli*.^{21, 22} Furthermore, female mucin-1 null mice develop chronic genito-urinary infections.²³

Myeloperoxidase (MPO) selectively binds and kills many gram-positive and -negative bacteria,²⁴ and also has candidicidal and antiviral properties.^{25, 26} Its activity is enhanced at acidic pH.²⁷

CD14 is the principal mammalian bacterial lipopolysaccharide receptor,^{28, 29} binds gram positive and gram negative bacterial surfaces,³⁰ and may also function as a viral receptor.³¹

S100A7 (Psoriasin) is present in urine,³² kills *E. coli* by pore formation, and is maximally effective at pH 6.^{33, 34}

Superoxide dismutase (SOD1) may inhibit bacterial growth by sequestering copper and zinc, and is implicated in host defence against *Schistosoma* infection.³⁵

Dermcidin adheres to bacterial cell walls and inhibits growth of gram positive and negative bacteria, and *Candida albicans*,³⁶ by inhibiting bacterial RNA and protein synthesis.³⁷

The D3 fragment of **kininogen-1 (KNG-1)** is potently bactericidal with activity against gram-positive and -negative bacteria.³⁸

Protein C Receptor (PROCR) contributes to host defence against *E. coli*, although the mechanism is not clear.³⁹

Fibronectin is a glycoprotein that is expressed at cell surfaces as a dimer, or secreted. It is the principle human receptor for *Treponema pallidum*⁴⁰ and *Trichomonas vaginalis*.⁴¹

PLUNC binds bacterial lipopolysaccharide, destabilises membranes and inhibits growth of *Pseudomonas aeruginosa*,^{42, 43} while overexpression of PLUNC in bronchial epithelium protects against mycoplasma infection.⁴⁴

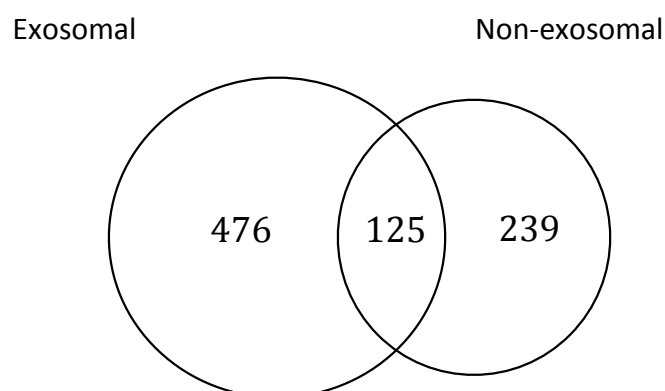
PGLYRP1 is a peptidoglycan recognition protein that demonstrates zinc-dependent killing of gram positive and gram negative bacteria.⁴⁵

Lactoferrin is a cationic protein that inhibits bacterial growth by sequestering iron, and by adhering to and destabilising bacterial membranes.^{46, 47}

Histatin-1 is a candidicidal protein.⁴⁸

Lipocalin 1 and **Lipocalin 2** are bacteriostatic proteins that inhibit bacterial growth by their ability to bind iron.^{49, 50}

Figure S1: Overlap between exosomal and soluble proteomes

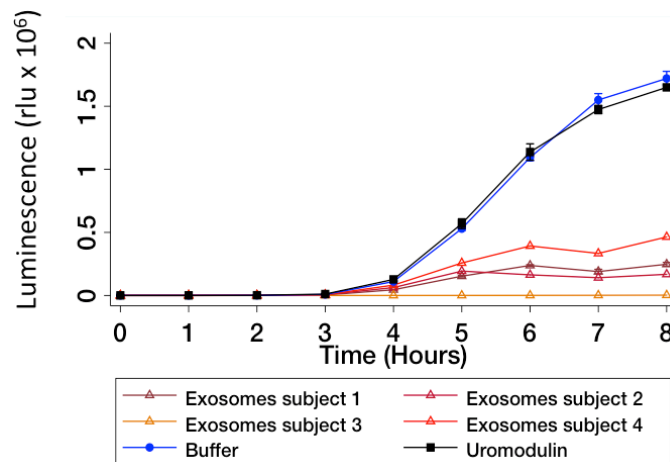


Of the exosomal proteome, 21% were shared with soluble urinary proteins from simultaneously prepared samples.

Bacterial strains:

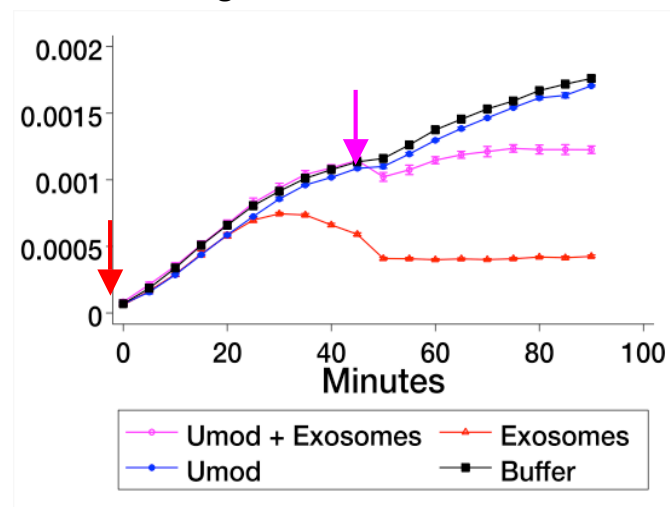
Strain	Source
BL21	Commercially available, e.g. New England Biolabs, Ipswich MA, USA. Catalogue number C2530H
UPEC	Clinical isolate from a patient with urinary tract infection, Addenbrooke's Hospital, Cambridge. Organism characterised using the VITEK2 system version 04.02, bioMerieux
Nissle	Mutaflor®, sourced from Ardeypharm GmbH, Hagen, Germany
UTI89	Gift of Dr Menna Clatworthy, Department of Medicine, University of Cambridge
CFT073	ATCC®, Manassas VA, USA Catalogue number 700928™

Figure S2: Variability between subjects of effects of exosomes on BL-21-lux growth



Each of 4 volunteer samples, displayed in aggregate form in Figure 4, significantly inhibited growth of BL21 *E. coli*.

Figure S3: Early effects of exosomes on growth of BL21 *E. coli*



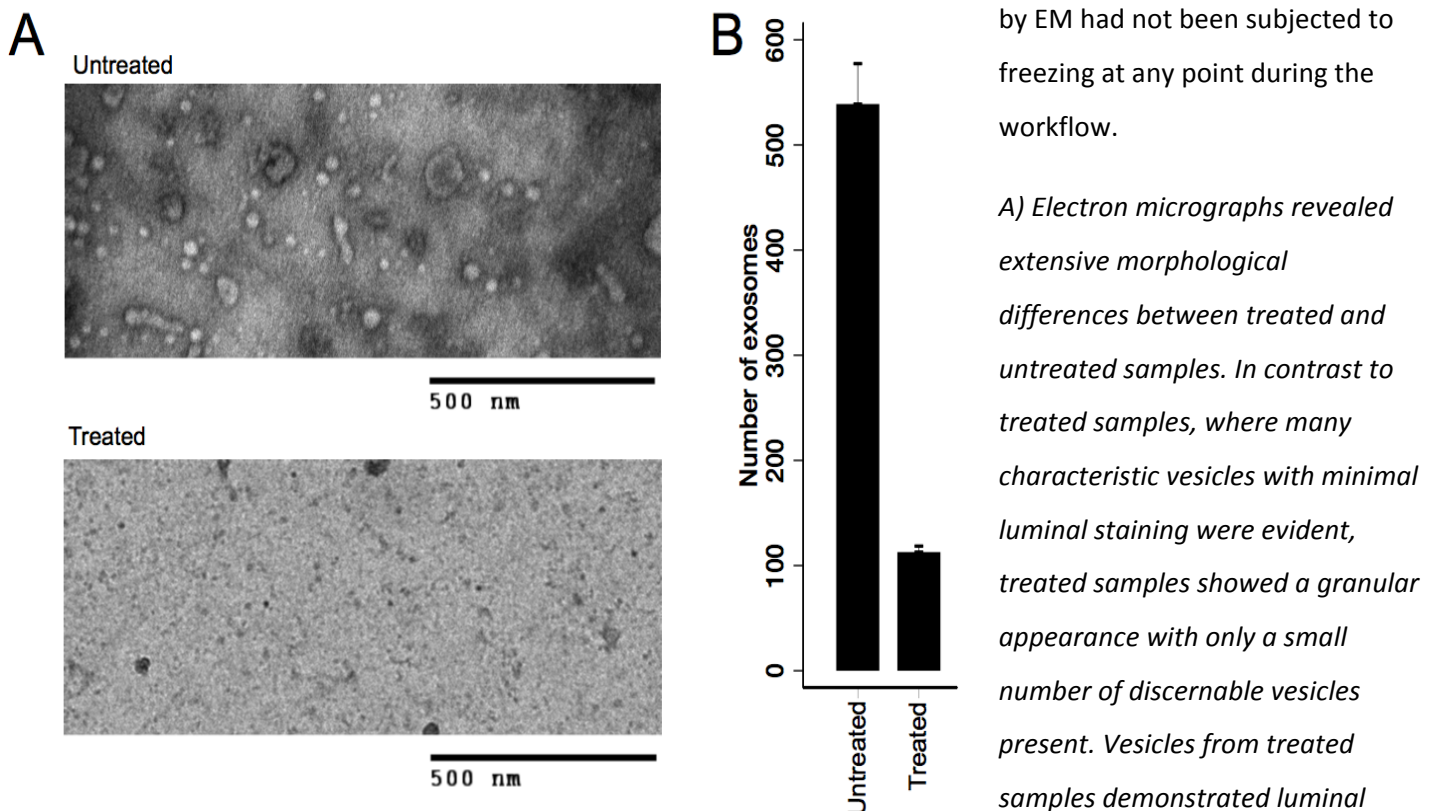
Addition of exosomes to BL21 (red arrow/curve) resulted in arrest of growth after approximately 30 min, with complete abolition of growth after 45 min. Uromodulin alone was not inhibitory; combination of exosomes with uromodulin after 45 min (pink arrow/curve) again abolished growth. BL21 was grown in LB medium, pH = 5.5.

Figure S4: Exosomal Lysis

To determine whether exosomal structural integrity was required for the observed bacterial growth inhibition, exosomal preparations were divided; one part was retained intact, whereas the other was subjected to chemical lysis.

Lysis was achieved with ammonium acetate and acetone precipitation as described under supplementary methods. Briefly, samples were incubated with 5 volumes 100% ammonium acetate in methanol overnight at 4°C, and centrifuged for 10 minutes at 3,000 x g. the resulting pellets were washed with 80% ammonium acetate at 4°C, and centrifuged for 10 minutes at 3,000 x g. The resulting pellets were washed with 80% acetone and centrifuged for 10 minutes at 3,000 x g. After removal of acetone, the final pellet was resuspended in 100 µl of a 250 mM sucrose solution, and equilibrated to a protein concentration matching that of the untreated exosomal aliquot.

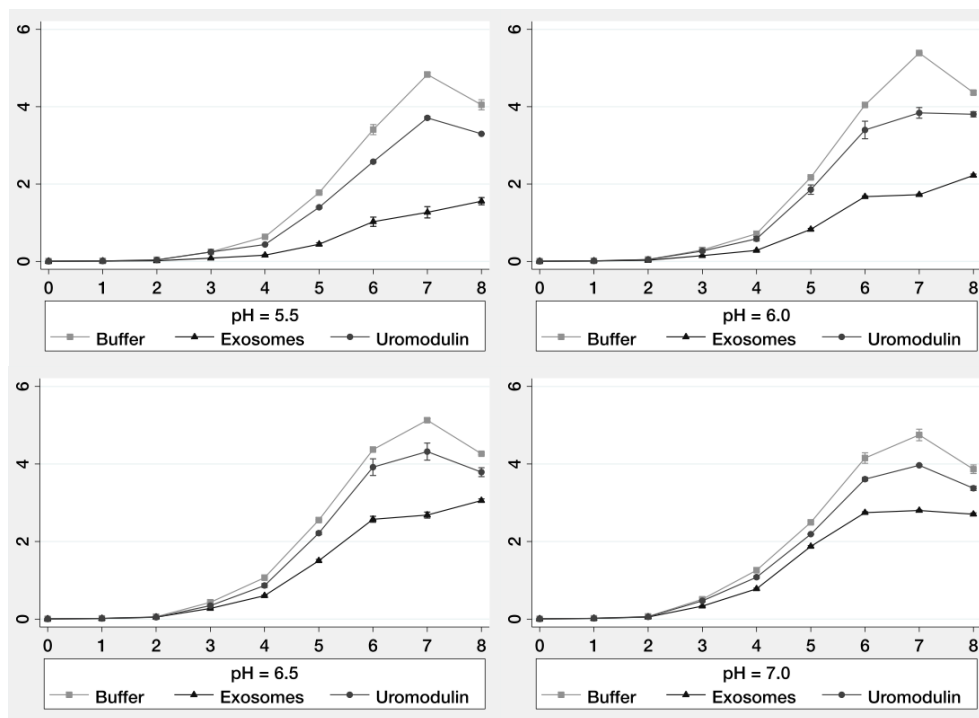
To confirm that this protocol achieved exosomal lysis, samples were evaluated by transmission electron microscopy as described under supplementary methods below. Briefly, 10 µl of the treated or untreated samples were placed (in triplicate) on glow-discharged formvar grids and negatively stained with 2% uranyl acetate. All samples evaluated



staining with uranyl acetate, consistent with compromised membrane integrity. Uromodulin polymerisation was also disrupted in the treated samples. B) Given that intact vesicles were evident in the treated samples, vesicles were manually counted from 5 randomly selected 4.2 x 3.4 µm areas per grid. Areas were selected by an independent observer. Treatment reduced the number of intact vesicles per field by approximately 80%, from 537 ± 38 to 113 ± 8 vesicles per field ($p < 0.0001$).

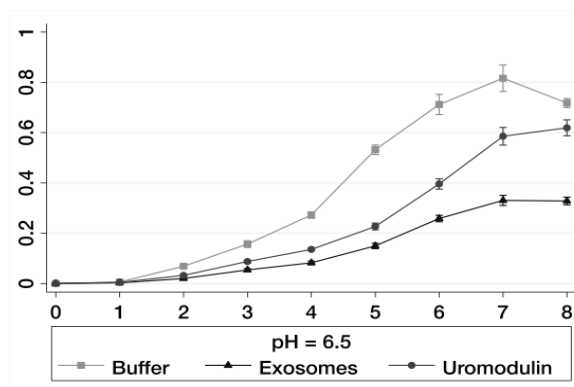
We observed that exosomes of which the integrity had been disrupted as described above were less effective at inhibiting growth of *E coli* (Figure 4). Despite this, these preparations retained some degree of efficacy. Since the treated samples contain the innate immune proteins present in the exosomes of the parent sample in soluble form, and given that many of these proteins are known to induce bacterial lysis, it is not surprising that treated samples retain some activity against *E coli*. Furthermore, it is possible that the small number of vesicles that survive the lysis procedure intact may contribute to this residual activity.

Figure S5: Effect of pH on exosomal action



UPEC-lux growth did not differ at differing pH. Exosomes inhibited *UPEC-lux* growth at pH 5.5 ($P = 0.001$), pH 6.0 ($P < 0.0001$), pH 6.5 ($P < 0.0001$) and pH 7.0 ($P = 0.0001$). However, the inhibitory effect of exosomes on *UPEC-lux* appeared to decrease with increasing pH. Uromodulin limited bacterial growth to some extent across the pH range, although this was not statistically significant.

Figure S6: Effect of exosomes on growth of UPEC (pH = 6.5) suspended in exosome-depleted urine supernatant



UPEC-lux growth was greater at higher pH 6.5 (above) than pH 5.5 (Figure 4F). As shown here, provision of exosomes inhibited UPEC-lux growth at pH 6.5 ($p = 0.0003$). Uromodulin inhibited growth of UPEC-lux at pH 6.5 to a lesser extent ($P = 0.0025$).

Effective exosomal concentration

Growth curve experiments were performed in 96-well plates, with a well volume of 400µl. Wells were filled to a total of 200µl, as shown in the example below:

Figure S7: Sample constitution for luminometry experiments

20µl (5µg) exosomes*	20µl (5µg) uromodulin*	20µl 250mM sucrose buffer
170µl LB/ exosome- depleted urine	170µl LB/ exosome- depleted urine	170µl LB/ exosome- depleted urine
10µl bacterial culture	10µl bacterial culture	10µl bacterial culture

Sample A

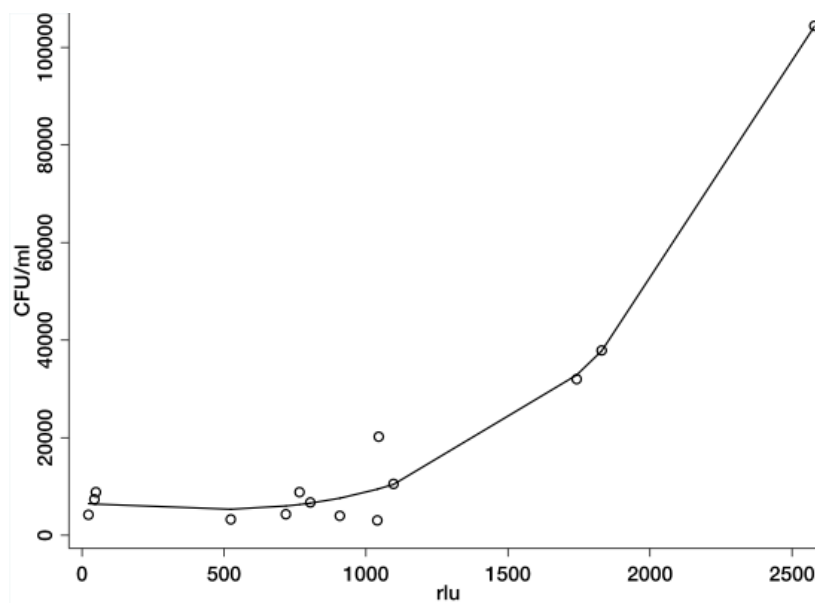
Sample B

Sample C

*suspended in 250mM sucrose buffer

Within this system, we found 5 μ g of exosomal material to be effective against a starting culture with an rlu of 500 or less. To assess the clinical relevance of this inhibition, we determined the equivalent amount of bacteria by colony counting. Using a set of serially diluted cultures of UPEC-lux, we determined the rlu and corresponding bacterial concentration by colony counting.

Figure S8: Determining effective concentration



The maximum bacterial concentration at which 25 μ g/ml of exosomes prevented bacterial growth was approximately 500rlu, and this was equivalent to 5369 cfu/ml. Given the mean concentration of urinary exosomes (0.54 μ g/ml) of a large volume second morning void urine sample, we could infer that a physiological amount of exosomes should inhibit growth of approximately 116 cfu/ml (5369/24.3). Our observations are likely to underestimate the effects of exosomes in vivo, since this experimental model relies on the inoculation of established bacterial cultures with a single dose of exosomal material in contrast to the situation in vivo where exosomes are continuously shed into the renal tract and some invading organisms are expelled during micturition.

Figure S9: Independent confirmation of immune proteins by Western blot

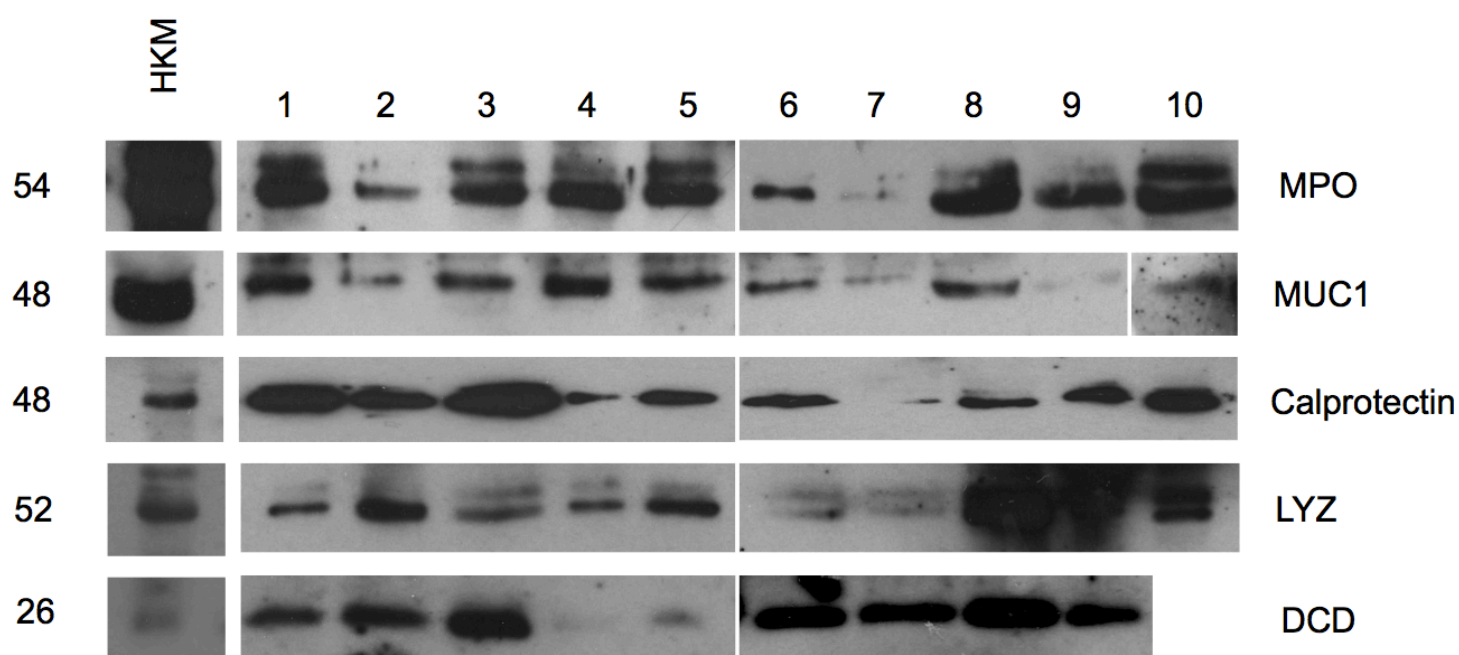
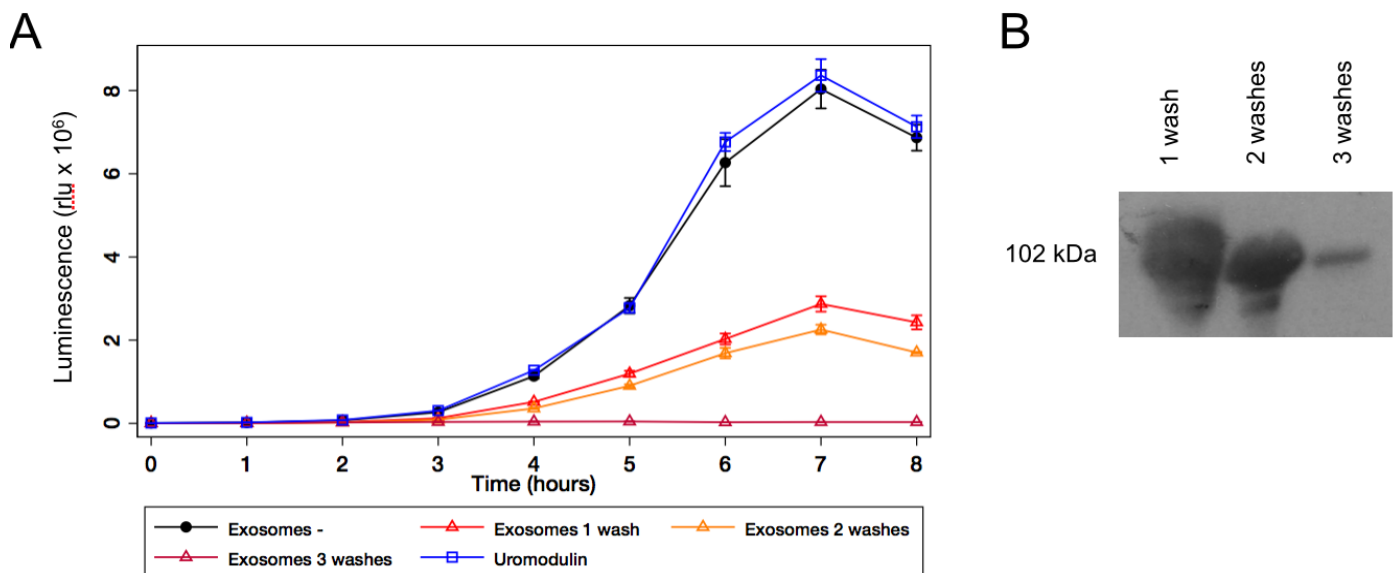


Figure S9: Western blot was carried out on exosomal preparations from an independent cohort of healthy adult volunteers. For all proteins shown, 12 µg of exosomal material was used. The positive control (HKM) represents 50 µg of human kidney membrane in every case. Blots for all five proteins were carried out on the same exosomal preparations. There was insufficient material from subject 10 to allow blotting for dermcidin, and this subject is unfortunately no longer available. All proteins tested were clearly present in all samples. Sample ten/MUC1 required longer exposure. Bands shown for calprotectin represent S100A8/S100A9-heterotetramer; bands for lysozyme C represent dimer. All blots were carried out without deglycosylation.

Figure S10: Effect of serial washes on exosomal action against E coli

To determine whether extra-exosomal components of exosomal isolates were contributing to the inhibition of bacterial growth by exosomes, we performed serial washes on an exosomal sample from a healthy male volunteer. An exosomal sample was prepared from a second morning void by ultracentrifugation as previously. The exosomal sample was divided into three equal volumes. The three aliquots were resuspended in 10 ml 250 mM sucrose and ultracentrifuged for 2 hours at 56,800 x g using a Beckman Ti90 fixed angle rotor. This process was carried out once, twice or three times for the three aliquots respectively.

To assess the effect of serial washes on bacterial growth inhibition, 10 µg of exosomal material from each of the three pellets were incubated with BL21-*lux*. Uromodulin 10 µg was included as a control.



A) All three washed exosomal preparations significantly inhibited growth of BL21 *E. coli*. Increasing the number of washes augmented the inhibition of bacterial growth. B) Western blot demonstrated a reduction in the principal extra-exosomal protein uromodulin with serial washes.

The apparent increase in efficacy after serial washes is explained by the use of a similar protein load for each condition, such that increased washes would reduce the amount of extra-exosomal contamination but increase the amount of exosomal material.

Supplementary methods

1. Protein precipitation for mass spectrometry

For mass spectrometry, protein was extracted by chemical precipitation. Briefly, 5 volumes of 1% ammonium acetate were added, and samples incubated at -20°C overnight, then centrifuged at 3,000 x *g* for 10 minutes at 4°C. The pellets were washed with 80% ammonium acetate, centrifuged at 3,000 x *g* for 10 minutes at 4°C, re-suspended in 80% acetone, and centrifuged at 3,000 x *g* for 15 minutes at 4°C. After removal of acetone, pellets were desiccated under a Speedvac for 3 minutes.

2. Espresso protein type-I error estimating algorithm

Proteins were regarded as "seen" by MS if 1) there were two or more spectrum-peptide matches (SPMs) with a false discovery rate < 0.1, 2) A single SPM with a MASCOT-percolator posterior error probability of < 0.01 was present, or 3) if the product of posterior error probabilities of all unique peptides attributed to a protein was < 0.01. This latter approach is termed espresso, and is briefly described here.

Espresso excludes all SPMs that are ambiguous (not attributable to a single gene product). Since MASCOT-percolator assigns a posterior error probability (PEP) to each identified PSM in a dataset, and since the PEP is the probability of a peptide called correct to be false, the probability of a *protein* identification being false can be computed from the PEP of each contributing PSM. We let the minimum PEP of a PSM in fraction *i* for the *j*th unique peptide sequence *u*, deriving from protein *P*, be denoted $E(u_{ij})$. It follows that, for a protein with *m* unique peptides identified from *n* fractions, the protein error $E(P)$ can be calculated as

$$E(P) = \prod_{i=1}^n \left\{ \prod_{j=1}^m E(u_{ij}) \right\}$$

The code for the espresso algorithm is freely available.

3. Antibodies

Antibody (name/target)	Source, catalogue	Type	Clone	Stock concentration	Usage (here)	Dilution
Uromodulin (Tamm Horsfall Protein)	Cedarlane CL1032A	Mouse mAb	10.32	57.2 mg/ml	WB EM	1:1000 1:5
TSG101	Abcam 0083	Mouse mAb	4A10	1mg/ml	WB EM	1:1000 1:5
Enolase-1	Biogenesis 0100-0261	Mouse mAb	8G8	0.5mg/ml	WB	1:500
Podocin	Gift	Mouse mAb	Unknown	1mg/ml	WB	1:1000
CD63	Abcam 8219	Mouse mAb	MEM-259	1mg/ml	WB EM	1:1000 1:5
Mucin-1	Abcam 70475	Mouse mAb	HMFG1	1.14mg/ml	WB EM	1:250 1:2
Lysozyme C	Abcam 36362	Mouse mAb	BGN/06/961	1mg/ml	WB EM	1:1000 1:5
Dermcidin	Santa-Cruz sc-33656	Mouse mAb	Unknown	0.2mg/ml	WB EM	1:500 1:5
Calprotectin (MRP8/14)	Acris BM4025X	Mouse mAb	27E10	1mg/ml	WB EM	1:500 1:5
Myeloperoxidase	Abcam 25989	Mouse mAb	2C7	1mg/ml	WB EM	1:1000 1:5

mAb - Monoclonal antibody; WB - Western blot; EM - electron microscopy. For Western blot, positive controls were human kidney membrane, except for dermcidin (AnanSpec Dermcidin DCD-1L, catalogue 67265), calprotectin and myeloperoxidase (neutrophil lysate).

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Supplementary Table S1. Proteins identified from human urinary exosomal samples by mass spectrometry

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:A1BG	Yes	A1BG	Alpha-1-B glycoprotein	Both	6	1.20E-31	Both methods	U
GROUP:A2ML1	Yes	A2ML1	Alpha-2-macroglobulin-like 1	Exclusion	1	4.84E-14	Espresso only	S, U
IPI00926669		ACAA1	Acetyl-Coenzyme A acyltransferase 1 (peroxisomal 3-oxoacyl-Coenzyme A thiolase)	Exclusion	1	1.92E-09	Espresso only	-
GROUP:ACLY	Yes	ACLY	ATP citrate lyase	Exclusion	1	0.0000145	Espresso only	Me, U
GROUP:ACTL6A	Yes	ACTL6A	Actin-like 6A	Non-exclusion	1	4.55E-09	Espresso only	-
IPI00032220		AGT	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)	Exclusion	1	4.84E-16	Espresso only	P
GROUP:AKR1A1	Yes	AKR1A1	Aldo-keto reductase family 1, member A1 (aldehyde reductase)	Both	7	0	Both methods	S, U
GROUP:AKR1B1	Yes	AKR1B1	Aldo-keto reductase family 1, member B1 (aldose reductase)	Both	3	0.000024	Both methods	Me, U
IPI00293721		AKR7A3	Aldo-keto reductase family 7, member A3 (aflatoxin aldehyde reductase)	Exclusion	1	0	Espresso only	U
GROUP:ALB	Yes	ALB	Albumin	Both	53	0	Both methods	CCC, MPE, P, S, U
IPI00916990		ALDH7A1	Aldehyde dehydrogenase 7 family, member A1	Non-exclusion	1	1.90E-06	Espresso only	H
GROUP:ALDOA	Yes	ALDOA	Aldolase A, fructose-bisphosphate	Both	14	0	Both methods	BC, B, CCC, S, U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:ALDOB	Yes	ALDOB	Aldolase B, fructose-bisphosphate	Both	14	0	Both methods	U
GROUP:ALDOC	Yes	ALDOC	Aldolase C, fructose-bisphosphate	Exclusion	1	1.23E-19	Espresso only	U
IPI00419916		ALPL	Alkaline phosphatase, liver/bone/kidney	Non-exclusion	3	0	Both methods	U
IPI00022426		AMBP	Alpha-1-microglobulin/bikunin precursor	Both	7	0	Both methods	U
IPI00238262		AMIGO2	Adhesion molecule with Ig-like domain 2	Non-exclusion	1	0.00302	Espresso only	-
IPI00790622		AMOTL2	Angiomotin like 2	Exclusion	1	1.38E-11	Espresso only	-
GROUP:AMY2B	Yes	AMY2B	Amylase, alpha 2B (pancreatic)	Non-exclusion	1	0.00716	Espresso only	S
GROUP:ANGPTL2	Yes	ANGPTL2	Angiopoietin-like 2	Both	11	0	Both methods	U
GROUP:ANKRD13C	Yes	ANKRD13C	Ankyrin repeat domain 13C	Non-exclusion	1	2.03E-06	Espresso only	-
GROUP:ANKRD18B	Yes	ANKRD18B	Ankyrin repeat domain 18B	Exclusion	1	0.0001665	Espresso only	-
GROUP:ANP32B	Yes	ANP32B	Acidic (leucine-rich) nuclear phosphoprotein 32 family, member B	Non-exclusion	1	0.00826	Espresso only	-
IPI00221224		ANPEP	Alanyl (membrane) aminopeptidase (aminopeptidase N, aminopeptidase M, microsomal aminopeptidase, CD13, p150)	Both	292	0	Both methods	S, U
GROUP:ANXA1	Yes	ANXA1	Annexin A1	Both	9	0	Both methods	A, CCC, M, S, TB, U
GROUP:ANXA4	Yes	ANXA4	Annexin A4	Both	48	0	Both methods	CCC, S, U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:ANXA6	Yes	ANXA6	Annexin A6	Exclusion	1	3.79E-16	Espresso only	B, CCC, Me, M, S, U
GROUP:AP3D1	Yes	AP3D1	Adaptor-related protein complex 3, delta 1 subunit	Non-exclusion	1	0.000029	Espresso only	-
IPI00022391		APCS	Amyloid P component, serum	Both	19	0	Both methods	U
GROUP:APLP1	Yes	APLP1	Amyloid beta (A4) precursor-like protein 1	Exclusion	1	0.0006056	Espresso only	-
GROUP:APOA1	Yes	APOA1	Apolipoprotein A-I	Non-exclusion	1	1.03E-07	Espresso only	CCC, S, U
IPI00021854		APOA2	Apolipoprotein A-II	Both	5	4.10E-31	Both methods	P, S, U
GROUP:APOA4	Yes	APOA4	Apolipoprotein A-IV	Both	6	5.33E-33	Both methods	U
GROUP:APOE	Yes	APOE	Apolipoprotein E	Both	28	0	Both methods	P, U
IPI00910625		APOH	Apolipoprotein H (beta-2-glycoprotein I)	Non-exclusion	1	1.76E-15	Espresso only	-
IPI00910333		AQP3	Aquaporin 3	Non-exclusion	2	2.48E-20	Both methods	A, U
GROUP:ARF6	Yes	ARF6	ADP-ribosylation factor 6	Both	6	0	Both methods	CCC, U
IPI00374285		ARHGEF37	Rho guanine nucleotide exchange factor (GEF) 37	Exclusion	1	3.22E-06	Espresso only	-
IPI00003327		ARL3	ADP-ribosylation factor-like 3	Both	6	0	Both methods	U
IPI00008405		ARSF	Arylsulfatase F	Both	4	0	Both methods	U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00940046		ASAH1	N-acylsphingosine amidohydrolase (acid ceramidase) 1	Both	6	0	Both methods	U
IPI00102281		ASPRV1	Aspartic peptidase, retroviral-like 1	Exclusion	1	3.26E-16	Espresso only	-
IPI00872410		ATG2B	ATG2 autophagy related 2 homolog B (S. cerevisiae)	Exclusion	1	4.43E-14	Espresso only	-
IPI00852619		ATP10B	ATPase, class V, type 10B	Non-exclusion	2	3.10E-26	Both methods	-
IPI00927118		ATP13A4	ATPase type 13A4	Exclusion	2	1.62E-06	Both methods	-
GROUP:ATP5B	Yes	ATP5B	ATP synthase, H+ transporting, mitochondrial F1 complex, beta polypeptide	Both	4	7.09E-23	Both methods	CCC, S, U
GROUP:ATP6V0C	Yes	ATP6V0C	ATPase, H+ transporting, lysosomal 16kDa, V0 subunit c	Exclusion	1	2.93E-11	Espresso only	U
GROUP:ATP6V1A	Yes	ATP6V1A	ATPase, H+ transporting, lysosomal 70kDa, V1 subunit A	Both	12	0	Both methods	S, U
GROUP:ATP6V1D	Yes	ATP6V1D	ATPase, H+ transporting, lysosomal 34kDa, V1 subunit D	Non-exclusion	2	3.62E-17	Both methods	S, U
GROUP:ATP6V1E1	Yes	ATP6V1E1	ATPase, H+ transporting, lysosomal 31kDa, V1 subunit E1	Both	5	0	Both methods	S, U
GROUP:ATXN3	Yes	ATXN3	Ataxin 3	Non-exclusion	2	5.07E-08	Both methods	-
IPI00179326		BAIAP2L1	BAI1-associated protein 2-like 1	Both	2	6.53E-19	Both methods	CCC, I, U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00299024		BASP1	Brain abundant, membrane attached signal protein 1	Exclusion	2	0.0000101	Both methods	TB, U
IPI00027416		BBOX1	Butyrobetaine (gamma), 2-oxoglutarate dioxygenase (gamma-butyrobetaine hydroxylase) 1	Non-exclusion	1	0.0000401	Espresso only	U
GROUP:BCAM	Yes	BCAM	Basal cell adhesion molecule (Lutheran blood group)	Exclusion	1	2.41E-06	Espresso only	U
IPI00004101		BHMT	Betaine-homocysteine methyltransferase	Exclusion	3	0	Both methods	U
GROUP:BRDT	Yes	BRDT	Bromodomain, testis-specific	Exclusion	2	6.38E-07	Both methods	-
IPI00166533		C10orf140	Chromosome 10 open reading frame 140	Exclusion	1	0.00155	Espresso only	-
GROUP:C11orf49	Yes	C11orf49	Chromosome 11 open reading frame 49	Non-exclusion	1	0.00264	Espresso only	-
IPI00059185		C11orf52	Chromosome 11 open reading frame 52	Both	9	0	Both methods	U
GROUP:C14orf106	Yes	C14orf106	Chromosome 14 open reading frame 106	Non-exclusion	3	1.78E-11	Both methods	-
GROUP:C17orf49	Yes	C17orf49 (BAP18)	Chromosome 17 open reading frame 49	Non-exclusion	1	0.0000363	Espresso only	-
GROUP:C19orf20	Yes	C19orf20	Chromosome 19 open reading frame 20	Non-exclusion	0	0.0000509	Espresso only	-
IPI00024925		C19orf77	Chromosome 19 open reading frame 77	Both	8	0	Both methods	-
IPI00145260		C1orf69	Chromosome 1 open reading frame 69	Non-exclusion	1	0.0000116	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:C20orf114	Yes	C20orf114	Chromosome 20 open reading frame 114	Both	12	0	Both methods	S, U
IPI00382821		C5orf32	Chromosome 5 open reading frame 32	Both	9	0	Both methods	CCC, U
IPI00945363		C6orf1	Chromosome 6 open reading frame 1	Both	2	2.12E-12	Both methods	-
IPI00396439		C6orf168	Chromosome 6 open reading frame 168	Exclusion	1	6.44E-26	Espresso only	-
GROUP:CA2	Yes	CA2	Carbonic anhydrase II	Both	14	0	Both methods	U
GROUP:CA4	Yes	CA4	Carbonic anhydrase IV	Exclusion	1	1.76E-26	Espresso only	U
GROUP:CAB39	Yes	CAB39	Calcium binding protein 39	Both	4	0	Both methods	S, U
IPI00220361		CALB1	Calbindin 1, 28kDa	Both	10	0	Both methods	U
GROUP:CALCRL	Yes	CALCRL	Calcitonin receptor-like	Non-exclusion	1	5.07E-06	Espresso only	-
IPI00216984		CALML3	Calmodulin-like 3	Exclusion	2	2.65E-31	Both methods	U
IPI00021536		CALML5	Calmodulin-like 5	Exclusion	3	2.13E-36	Both methods	-
IPI00909886		CARD9	Caspase recruitment domain family, member 9	Both	3	2.89E-13	Both methods	-
IPI00925214		CASP12	Caspase 12	Both	16	0	Both methods	-
GROUP:CBR1	Yes	CBR1	Carbonyl reductase 1	Both	7	0	Both methods	CCC, S, U
GROUP:CCDC6	Yes	CCDC6	Coiled-coil domain containing 6	Non-exclusion	1	0.00477	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00893019		CCDC88A	Coiled-coil domain containing 88A	Non-exclusion	1	1.46E-11	Espresso only	-
GROUP:CCT2	Yes	CCT2	Chaperonin containing TCP1, subunit 2 (beta)	Non-exclusion	1	0.0001455	Espresso only	BCCC, CCC, U
IPI00029260		CD14	CD14 molecule	Both	3	5.68E-28	Both methods	S, U
GROUP:CD2AP	Yes	CD2AP	CD2-associated protein	Exclusion	2	2.79E-34	Both methods	U
IPI00011302		CD59	CD59 molecule, complement regulatory protein	Both	13	0	Both methods	CCC, S, TB, U
GROUP:CEBPA	Yes	CEBPA	CCAAT/enhancer binding protein (C/EBP), alpha	Exclusion	1	5.37E-16	Espresso only	-
IPI00386504		CELF4	Elav-like family member 4	Exclusion	1	0.0000834	Espresso only	-
IPI00074020		CENPK	Centromere protein K	Exclusion	0	0.000722	Espresso only	-
GROUP:CENTD1	Yes	CENTD1	Centaurin, delta 1	Exclusion	1	0.0015115	Espresso only	-
IPI00165972		CFD	Complement factor D (adipsin)	Non-exclusion	1	0.0000549	Espresso only	U
GROUP:CFL1	Yes	CFL1	Cofilin 1 (non-muscle)	Both	2	7.96E-19	Both methods	B, CCC, S, TB, U
GROUP:CFL2	Yes	CFL2	Cofilin 2 (muscle)	Exclusion	1	4.62E-16	Espresso only	CCC
GROUP:CHMP1A	Yes	CHMP1A	Chromatin modifying protein 1A	Both	5	3.26E-19	Both methods	CCC, U
IPI00156984		CHMP1B	Chromatin modifying protein 1B	Both	13	0	Both methods	U
GROUP:CHMP2A	Yes	CHMP2A	Chromatin modifying protein 2A	Both	22	0	Both methods	CCC, U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:CHMP4B	Yes	CHMP4B	Chromatin modifying protein 4B	Both	18	0	Both methods	CCC, U
IPI00060414		CHMP4C	Chromatin modifying protein 4C	Both	2	6.51E-17	Both methods	-
GROUP:CHMP5	Yes	CHMP5	Chromatin modifying protein 5	Both	27	0	Both methods	U
GROUP:CLIC1	Yes	CLIC1	Chloride intracellular channel 1	Both	9	0	Both methods	BCCC, CCC, TB, U
IPI00383046		CMBL	Carboxymethylenebutenolidase homolog (Pseudomonas)	Non-exclusion	3	0	Both methods	U
GROUP:CNP	Yes	CNP	2',3'-cyclic nucleotide 3' phospho-diesterase	Both	3	0	Both methods	M, S, U
GROUP:CNTN3	Yes	CNTN3	Contactin 3 (plasmacytoma associated)	Both	2	2.12E-07	Both methods	-
GROUP:CNTN6	Yes	CNTN6	Contactin 6	Non-exclusion	1	1.20E-06	Espresso only	MC
GROUP:COBRA1	Yes	COBRA1	Cofactor of BRCA1	Non-exclusion	3	0	Both methods	-
GROUP:COL15A1	Yes	COL15A1	Collagen, type XV, alpha 1	Both	8	0	Both methods	U
GROUP:COL18A1	Yes	COL18A1	Collagen, type XVIII, alpha 1	Both	2	1.87E-20	Both methods	S, U
IPI00297646		COL1A1	Collagen, type I, alpha 1	Non-exclusion	1	0.0013002	Espresso only	Fe
GROUP:COL27A1	Yes	COL27A1	Collagen, type XXVII, alpha 1	Exclusion	1	7.96E-06	Espresso only	-
IPI00291136		COL6A1	Collagen, type VI, alpha 1	Exclusion	7	0	Both methods	S, U
IPI00514903		COQ3	Coenzyme Q3 homolog, methyltransferase (S.	Non-exclusion	1	0.0000432	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
			cerevisiae)					
IPI00464968		COX1	Cytochrome c oxidase subunit I	Non-exclusion	1	0.0052906	Espresso only	-
IPI00737939		COX8C	Cytochrome c oxidase subunit 8C	Exclusion	1	4.98E-06	Espresso only	-
GROUP:CPM	Yes	CPM	Carboxypeptidase M	Exclusion	1	0.000892	Espresso only	-
IPI00024403		CPNE3	Copine III	Exclusion	1	2.46E-06	Espresso only	S, U
GROUP:CPT1C	Yes	CPT1C	Carnitine palmitoyltransferase 1C	Exclusion	1	0.0025859	Espresso only	-
IPI00428057		CREB3L2	CAMP responsive element binding protein 3-like 2	Exclusion	1	0.000291	Espresso only	-
IPI00916918		CREB5	CAMP responsive element binding protein 5	Non-exclusion	2	1.54E-21	Both methods	U
GROUP:CREBBP	Yes	CREBBP	CREB binding protein (Rubinstein-Taybi syndrome)	Exclusion	3	0.0000457	Two peptide rule only	-
IPI00297056		CRNN	Cornulin	Both	6	0	Both methods	S, U
GROUP:CRYZ	Yes	CRYZ	Crystallin, zeta (quinone reductase)	Non-exclusion	1	5.60E-14	Espresso only	CCC, U
GROUP:CSGALNACT1	Yes	CSGALNACT1	Chondroitin sulfate N-acetylgalactosaminyltransferase 1	Non-exclusion	2	0	Both methods	-
IPI00019157		CSPG4	Chondroitin sulfate proteoglycan 4	Exclusion	1	0.0005923	Espresso only	CCC
IPI00032293		CST3	Cystatin C	Exclusion	1	0.0035644	Espresso only	CCC, S, U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:CSTA	Yes	CSTA	Cystatin A (stefin A)	Exclusion	2	4.50E-31	Both methods	-
IPI00021828		CSTB	Cystatin B (stefin B)	Exclusion	2	0	Both methods	S, U
IPI00607841		CSTF2	Cleavage stimulation factor, 3' pre-RNA, subunit 2, 64kDa	Exclusion	1	0.0002918	Espresso only	-
IPI00909622		CSTF2	Cleavage stimulation factor, 3' pre-RNA, subunit 2, 64kDa	Exclusion	1	7.25E-10	Espresso only	-
GROUP:CTDP1	Yes	CTDP1	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) phosphatase, subunit 1	Both	2	0.00005	Both methods	-
GROUP:CTSA	Yes	CTSA	Cathepsin A	Both	10	0	Both methods	U
GROUP:CTSC	Yes	CTSC	Cathepsin C	Both	2	0	Both methods	S, U
GROUP:CUBN	Yes	CUBN	Cubilin (intrinsic factor-cobalamin receptor)	Both	37	0	Both methods	U
IPI00911104		CYB5R1	Cytochrome b5 reductase 1	Non-exclusion	1	0.00709	Espresso only	S
IPI00916645		CYBRD1	Cytochrome b reductase 1	Non-exclusion	2	1.08E-06	Both methods	U
IPI00032876		CYTL1	Cytokine-like 1	Non-exclusion	1	4.01E-23	Espresso only	-
IPI00936290		DACH1	Dachshund homolog 1 (Drosophila)	Both	3	1.55E-07	Both methods	-
GROUP:DAK	Yes	DAK	Dihydroxyacetone kinase 2 homolog (S. cerevisiae)	Exclusion	2	0	Both methods	U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:DCD	Yes	DCD	Dermcidin	Exclusion	1	1.99E-35	Espresso only	CCC, U
IPI00478916		DCLRE1A	DNA cross-link repair 1A (PSO2 homolog, <i>S. cerevisiae</i>)	Non-exclusion	1	0.0039046	Espresso only	-
IPI00220342		DDAH1	Dimethylarginine dimethylaminohydrolase 1	Non-exclusion	2	2.13E-08	Both methods	U
GROUP:DDAH2	Yes	DDAH2	Dimethylarginine dimethylaminohydrolase 2	Both	2	1.40E-16	Both methods	U
GROUP:DDX49	Yes	DDX49	DEAD (Asp-Glu-Ala-Asp) box polypeptide 49	Exclusion	3	0	Both methods	-
IPI00513969		DDX59	DEAD (Asp-Glu-Ala-Asp) box polypeptide 59	Non-exclusion	1	1.65E-06	Espresso only	-
IPI00935308		DEFB109	Defensin, beta 109	Both	2	0.0001019	Both methods	-
GROUP:DHX9	Yes	DHX9	DEAH (Asp-Glu-Ala-His) box polypeptide 9	Exclusion	1	0.0000111	Espresso only	-
GROUP:DNAH5	Yes	DNAH5	Dynein, axonemal, heavy chain 5	Exclusion	1	5.31E-10	Espresso only	-
IPI00031065		DNASE1	Deoxyribonuclease I	Non-exclusion	3	9.70E-12	Both methods	-
IPI00941939		DNM1	Dynamin 1	Exclusion	1	5.88E-16	Espresso only	-
IPI00059476		DPEP1	Dipeptidase 1 (renal)	Both	74	0	Both methods	CCC, I, U
IPI00018953		DPP4	Dipeptidyl-peptidase 4 (CD26, adenosine deaminase complexing protein 2)	Both	18	0	Both methods	CCC, I, S, U
IPI00025753		DSG1	Desmoglein 1	Exclusion	10	0	Both methods	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00515022		DSG4	Desmoglein 4	Exclusion	1	0.0007645	Espresso only	-
GROUP:DSP	Yes	DSP	Desmoplakin	Both	101	0	Both methods	M, S, U
GROUP:DSPP	Yes	DSPP	Dentin sialophosphoprotein	Exclusion	1	0.001841	Espresso only	-
IPI00944963		DUSP7	Dual specificity phosphatase 7	Exclusion	2	1.23E-24	Both methods	-
GROUP:ECE1	Yes	ECE1	Endothelin converting enzyme 1	Non-exclusion	1	6.11E-16	Espresso only	U
GROUP:EEF2	Yes	EEF2	Eukaryotic translation elongation factor 2	Exclusion	1	0.0011582	Espresso only	CCC, Me, S, U
IPI00019501		EFNB3	Ephrin-B3	Exclusion	1	0.00472	Espresso only	-
IPI00000073		EGF	Epidermal growth factor (beta-urogastrone)	Both	104	0	Both methods	U
GROUP:EHD1	Yes	EHD1	EH-domain containing 1	Exclusion	1	0.0007326	Espresso only	CCC, S, U
GROUP:EHD4	Yes	EHD4	EH-domain containing 4	Both	7	0	Both methods	B, CCC, U
GROUP:EIF4A1	Yes	EIF4A1	Eukaryotic translation initiation factor 4A, isoform 1	Non-exclusion	1	1.34E-13	Espresso only	CCC
GROUP:ENO1	Yes	ENO1	Enolase 1, (alpha)	Both	51	0	Both methods	BC, CCC, I, Me, M, S, U
IPI00014375		ENPEP	Glutamyl aminopeptidase (aminopeptidase A)	Both	7	0	Both methods	U
IPI00157414		ENPP6	Ectonucleotide pyrophosphatase/phosphodiesterase 6	Exclusion	1	7.89E-27	Espresso only	U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00169058		ENSG00000181943		Non-exclusion	1	0.00954	Espresso only	-
GROUP:EP300	Yes	EP300	E1A binding protein p300	Both	3	8.23E-14	Both methods	-
GROUP:EPPK1	Yes	EPPK1	Epiplakin 1	Both	9	0	Both methods	CCC, U
GROUP:EPS8	Yes	EPS8	Epidermal growth factor receptor pathway substrate 8	Exclusion	1	1.12E-12	Espresso only	I, U
GROUP:EPS8L1	Yes	EPS8L1	EPS8-like 1	Both	2	9.64E-25	Both methods	U
GROUP:EPS8L2	Yes	EPS8L2	EPS8-like 2	Exclusion	3	0	Both methods	S, TB, U
GROUP:ERBB3	Yes	ERBB3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)	Exclusion	1	0.0000408	Espresso only	-
GROUP:ESCO2	Yes	ESCO2	Establishment of cohesion 1 homolog 2 (S. cerevisiae)	Non-exclusion	1	0.0006284	Espresso only	-
IPI00024167		ESF1	ESF1, nucleolar pre-rRNA processing protein, homolog (S. cerevisiae)	Exclusion	2	4.50E-24	Both methods	-
GROUP:ESX1	Yes	ESX1	ESX homeobox 1	Exclusion	2	1.45E-07	Both methods	-
GROUP:EXOC2	Yes	EXOC2	Exocyst complex component 2	Exclusion	1	0.0016665	Espresso only	-
GROUP:EZR	Yes	EZR	Ezrin	Both	67	0	Both methods	CCC, Me, M, TB, U
IPI00219684		FABP3	Fatty acid binding protein 3, muscle and heart (mammary-derived growth inhibitor)	Exclusion	1	0.0001728	Espresso only	B, U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:FABP5	Yes	FABP5	Fatty acid binding protein 5 (psoriasis-associated)	Exclusion	3	0	Both methods	MC
GROUP:FAM125A	Yes	FAM125A	Family with sequence similarity 125, member A	Exclusion	1	1.92E-28	Espresso only	CCC, U
GROUP:FBP1	Yes	FBP1	Fructose-1,6-bisphosphatase 1	Both	7	0	Both methods	U
GROUP:FGA	Yes	FGA	Fibrinogen alpha chain	Both	19	0	Both methods	P, U
GROUP:FGB	Yes	FGB	Fibrinogen beta chain	Exclusion	14	0	Both methods	MPE, P, SF
GROUP:FGL2	Yes	FGL2	Fibrinogen-like 2	Exclusion	3	2.05E-11	Both methods	U
GROUP:FLG	Yes	FLG	Filaggrin	Both	30	0	Both methods	-
GROUP:FLG2	Yes	FLG2	Filaggrin family member 2	Exclusion	20	0	Both methods	-
IPI00744322		FLJ39582	THAP7 antisense RNA 1	Exclusion	1	0.00684	Espresso only	-
GROUP:FLJ43950	Yes	FLJ43950	FLJ43950 protein	Non-exclusion	1	6.84E-15	Espresso only	-
GROUP:FLT1	Yes	FLT1	Fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor)	Exclusion	1	2.89E-08	Espresso only	-
GROUP:FN1	Yes	FN1	Fibronectin 1	Exclusion	2	5.31E-13	Both methods	M, P, SF, U
GROUP:FUT10	Yes	FUT10	Fucosyltransferase 10 (alpha (1,3) fucosyltransferase)	Exclusion	1	0.00306	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:FXVD2	Yes	FXVD2	FXVD domain containing ion transport regulator 2	Both	3	4.15E-18	Both methods	U
IPI00911090		GANC	Glucosidase, alpha; neutral C	Exclusion	0	0.0001682	Espresso only	-
GROUP:GAPDH	Yes	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	Both	43	0	Both methods	BC, BCCC, CCC, I, Me, M, S, TB, U
IPI00008832		GAS1	Growth arrest-specific 1	Exclusion	1	0.0008886	Espresso only	-
IPI00215768		GCLC	Glutamate-cysteine ligase, catalytic subunit	Non-exclusion	1	0.0040525	Espresso only	-
GROUP:GFAP	Yes	GFAP	Glial fibrillary acidic protein	Non-exclusion	6	1.55E-26	Both methods	-
IPI00023728		GGH	Gamma-glutamyl hydrolase (conjugase, folylpolyglutamyl hydrolase)	Both	7	0	Both methods	U
GROUP:GGT1	Yes	GGT1	Gamma-glutamyltransferase 1	Exclusion	2	0.0000765	Both methods	U
GROUP:GIPC2	Yes	GIPC2	GIPC PDZ domain containing family, member 2	Exclusion	1	6.34E-06	Espresso only	U
IPI00220766		GLO1	Glyoxalase I	Exclusion	2	9.60E-16	Both methods	U
IPI00018236		GM2A	GM2 ganglioside activator	Non-exclusion	1	1.13E-17	Espresso only	U
GROUP:GNA11	Yes	GNA11	Guanine nucleotide binding protein (G protein), alpha 11 (Gq class)	Both	3	7.09E-25	Both methods	Me, S, U
IPI00027243		GNA15	Guanine nucleotide binding protein (G protein), alpha 15 (Gq class)	Non-exclusion	1	6.78E-07	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:GNAI3	Yes	GNAI3	Guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 3	Exclusion	2	5.96E-35	Both methods	CCC, U
GROUP:GNB1	Yes	GNB1	Guanine nucleotide binding protein (G protein), beta polypeptide 1	Exclusion	5	0	Both methods	CCC, Me, S, U
IPI00221232		GNG12	Guanine nucleotide binding protein (G protein), gamma 12	Both	6	0	Both methods	CCC, U
IPI00232571		GPC4	Glypican 4	Non-exclusion	1	4.90E-18	Espresso only	S
IPI00019180		GPC5	Glypican 5	Non-exclusion	1	6.45E-08	Espresso only	-
GROUP:GPX3	Yes	GPX3	Glutathione peroxidase 3 (plasma)	Exclusion	1	1.24E-31	Espresso only	S
GROUP:GRIN3A	Yes	GRIN3A	Glutamate receptor, ionotropic, N-methyl-D-aspartate 3A	Non-exclusion	0	9.11E-09	Espresso only	-
GROUP:GSK3A	Yes	GSK3A	Glycogen synthase kinase 3 alpha	Non-exclusion	1	6.97E-18	Espresso only	-
GROUP:GSTP1	Yes	GSTP1	Glutathione S-transferase pi	Exclusion	1	0.0000351	Espresso only	CCC, Me, S, TB, U
GROUP:GYPC	Yes	GYPC	Glycophorin C (Gerbich blood group)	Non-exclusion	1	1.33E-08	Espresso only	-
IPI00913960		HAS1	Hyaluronan synthase 1	Exclusion	2	1.36E-08	Both methods	-
GROUP:HBA1; HBA2	Yes	HBA1; HBA2	Haemoglobin alpha1, alpha 2	Both	3	0	Both methods	P
GROUP:HBB	Yes	HBB	Haemoglobin beta	Both	2	0	Both methods	P, U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00045223		HEJ1	DNAJA1P5 DnaJ (Hsp40) homolog, subfamily A, member 1 pseudogene 5	Both	3	3.84E-23	Both methods	-
GROUP:HERC2	Yes	HERC2	Hect domain and RLD 2	Exclusion	2	0.0004256	Two peptide rule only	-
GROUP:HES2	Yes	HES2	Hairy and enhancer of split 2 (Drosophila)	Exclusion	1	5.41E-10	Espresso only	-
GROUP:HIST1H1D	Yes	HIST1H1D	Histone cluster 1, H1d	Both	2	3.28E-24	Both methods	MC
IPI00014165		HIST1H2APS4	Histone cluster 1, H2a, pseudogene 4	Exclusion	1	1.37E-07	Espresso only	-
IPI00453473		HIST2H4B HIST2H4A HIST1H4A HIST1H4D HIST1H4F HIST1H4C HIST1H4H HIST1H4B HIST1H4E HIST1H4I HIST1H4K HIST1H4J HIST1H4L HIST4H4	Histone cluster 1, Histone cluster 2	Both	19	0	Both methods	CC, Pa, MC, O,
GROUP:HLA-DQB1; HLA-DQB2; HLA-DRB1; HLA-DRB2; HLA-DRB3; HLA-DRB4; HLA-DRB5	Yes	HLA-DQB1; HLA-DQB2; HLA-DRB1; HLA-DRB2; HLA-DRB3; HLA-DRB4; HLA-DRB5	Major histocompatibility complex, class II	Both	7	0	Both methods	BC, T cells

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00007339		HMG20B	High-mobility group 20B	Both	2	4.88E-07	Two peptide rule only	-
IPI00514742		HMGCL	3-hydroxymethyl-3-methylglutaryl-Coenzyme A lyase (hydroxymethylglutaricaciduria)	Exclusion	1	0.00265	Espresso only	-
GROUP:HNRNPA2B1	Yes	HNRNPA2B1	Heterogeneous nuclear ribonucleoprotein A2/B1	Non-exclusion	1	7.11E-10	Espresso only	BCCC, CCC
IPI00927894		HNRNPA3	Heterogeneous nuclear ribonucleoprotein A3	Non-exclusion	1	4.82E-16	Espresso only	MC
GROUP:HNRNPF	Yes	HNRNPF	Heterogeneous nuclear ribonucleoprotein F	Non-exclusion	1	1.17E-08	Espresso only	MC
IPI00022488		HPX	Hemopexin	Both	3	5.99E-19	Both methods	U
IPI00022371		HRG	Histidine-rich glycoprotein	Non-exclusion	1	9.51E-17	Espresso only	U
GROUP:HRH2	Yes	HRH2	Histamine receptor H2	Both	2	0.0003105	Two peptide rule only	-
GROUP:HRNR	Yes	HRNR	Hornerin	Both	85	0	Both methods	P
GROUP:HRSP12	Yes	HRSP12	Heat-responsive protein 12	Exclusion	2	1.53E-27	Both methods	U
GROUP:HSP90AA1	Yes	HSP90AA1	Heat shock protein 90kDa alpha (cytosolic), class A member 1	Non-exclusion	3	0	Both methods	BC, CCC, I, MPE, M, S, U
GROUP:HSP90AB1	Yes	HSP90AB1	Heat shock protein 90kDa alpha (cytosolic), class B member 1	Non-exclusion	4	0	Both methods	CCC, M, U
IPI00007765		HSPA9	Heat shock 70kDa protein 9 (mortalin)	Exclusion	1	1.15E-08	Espresso only	BCCC, CCC

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:HTN1	Yes	HTN1	Histatin 1	Exclusion	1	1.55E-30	Espresso only	-
GROUP:IDS	Yes	IDS	Iduronate 2-sulfatase (Hunter syndrome)	Non-exclusion	1	0.00471	Espresso only	-
IPI00024254		IFIT3	Interferon-induced protein with tetratricopeptide repeats 3	Both	2	3.35E-16	Both methods	-
IPI00016915		IGFBP7	Insulin-like growth factor binding protein 7	Both	18	0	Both methods	-
GROUP:IGHA1; IGHV3OR16-13	Yes	IGHA1; IGHV3OR16-13	Immunoglobulin heavy constant alpha 1	Both	21	0	Both methods	B, S
GROUP:IGHG1	Yes	IGHG1	Immunoglobulin heavy constant gamma 1 (G1m marker)	Non-exclusion	1	0.0020099	Espresso only	CCC, MPE
IPI00930442		IGHG4	Immunoglobulin heavy constant gamma 4	Non-exclusion	1	0.0031042	Espresso only	CCC
IPI00382488		IGHV4-59	Immunoglobulin heavy variable 4-59	Non-exclusion	1	0.0000642	Espresso only	-
IPI00178926		IGJ	Immunoglobulin J polypeptide, linker protein for immunoglobulin alpha and mu polypeptides	Both	3	6.65E-34	Both methods	P, S
IPI00830057		IGK	Immunoglobulin kappa locus	Exclusion	1	1.21E-27	Espresso only	-
IPI00387113		IGK@	Immunoglobulin kappa locus	Both	3	3.26E-10	Both methods	CCC
IPI00909649		IGKC	Immunoglobulin Kappa constant	Both	6	0	Both methods	CCC, S
GROUP:IGL@	Yes	IGL@	Immunoglobulin lambda locus	Both	2	3.27E-08	Both methods	S

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00382440		IGLV3-25	Immunoglobulin lambda variable 3-25	Exclusion	4	0	Both methods	-
IPI00152189		IGLV9-49	Immunoglobulin lambda variable 9-49	Non-exclusion	1	0.000353	Espresso only	-
IPI00930108		IQCC	IQ motif containing C	Exclusion	1	6.17E-07	Espresso only	-
IPI00023410		ITGA8	Integrin, alpha 8	Both	2	0.0017499	Two peptide rule only	-
GROUP:ITGB1	Yes	ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)	Both	3	1.79E-20	Both methods	CCC, U
IPI00555554		ITGB8	Integrin, beta 8	Non-exclusion	1	0.00155	Espresso only	U
GROUP:ITPR2	Yes	ITPR2	Inositol 1,4,5-triphosphate receptor, type 2	Non-exclusion	1	0.000119	Espresso only	-
IPI00011692		IVL	Involucrin	Exclusion	4	0	Both methods	S
GROUP:JUP	Yes	JUP	Junction plakoglobin	Both	32	0	Both methods	CCC, S, U
IPI00020003		KCNJ8	Potassium inwardly-rectifying channel, subfamily J, member 8	Non-exclusion	1	0.00121	Espresso only	-
IPI00060715		KCTD12	Potassium channel tetramerisation domain containing 12	Both	4	0	Both methods	-
GROUP:KHSRP	Yes	KHSRP	KH-type splicing regulatory protein (FUSE binding protein 2)	Exclusion	1	9.45E-28	Espresso only	-
IPI00643007		KIAA0174	KIAA0174	Exclusion	1	0.004036	Espresso only	CCC, S, U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00844000		KIAA0776	KIAA0776	Non-exclusion	1	6.61E-17	Espresso only	-
IPI00852954		KIAA1045	KIAA1045	Non-exclusion	1	0.00429	Espresso only	-
GROUP:KIAA1529	Yes	KIAA1529	KIAA1529	Both	20	0	Both methods	U
GROUP:KIAA2022	Yes	KIAA2022	KIAA2022	Exclusion	1	0.0072328	Espresso only	-
GROUP:KIF12	Yes	KIF12	Kinesin family member 12	Exclusion	1	4.65E-08	Espresso only	U
GROUP:KIR2DL3	Yes	KIR2DL3	Killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 3	Exclusion	1	0.000151	Espresso only	-
GROUP:KLK15	Yes	KLK15	Kallikrein-related peptidase 15	Exclusion	1	1.88E-10	Espresso only	-
GROUP:KNG1	Yes	KNG1	Kininogen 1	Both	3	0	Both methods	U
IPI00514908		KPRP	Keratinocyte proline-rich protein	Exclusion	6	2.72E-32	Both methods	S, U
IPI00186166		KPTN	Kaptin (actin binding protein)	Non-exclusion	1	6.78E-07	Espresso only	-
GROUP:KRT1	Yes	KRT1	Keratin 1 (epidermolytic hyperkeratosis)	Both	647	0	Both methods	CCC, I, S
GROUP:KRT10	Yes	KRT10	Keratin 10 (epidermolytic hyperkeratosis; keratosis palmaris et plantaris)	Both	416	0	Both methods	CCC, I, Me, S
GROUP:KRT13	Yes	KRT13	Keratin 13	Both	24	0	Both methods	CCC, S
GROUP:KRT13	Yes	KRT13	Keratin 13	Both	10	0	Both methods	CCC, S

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:KRT14	Yes	KRT14	Keratin 14 (epidermolysis bullosa simplex, Dowling-Meara, Koebner)	Both	18	0	Both methods	CCC, S
GROUP:KRT16	Yes	KRT16	Keratin 16 (focal non-epidermolytic palmoplantar keratoderma)	Both	69	0	Both methods	CCC, S
GROUP:KRT17	Yes	KRT17	Keratin 17	Non-exclusion	1	1.41E-07	Espresso only	CCC, S
GROUP:KRT18	Yes	KRT18	Keratin 18	Exclusion	4	1.56E-32	Both methods	CCC, S
GROUP:KRT2	Yes	KRT2	Keratin 2 (epidermal ichthyosis bullosa of Siemens)	Both	325	0	Both methods	CCC, S
GROUP:KRT20	Yes	KRT20	Keratin 20	Exclusion	1	0.0000383	Espresso only	CCC
GROUP:KRT31	Yes	KRT31	Keratin 31	Exclusion	1	0.00102	Espresso only	-
GROUP:KRT4	Yes	KRT4	Keratin 4	Both	66	0	Both methods	CCC, S
GROUP:KRT5	Yes	KRT5	Keratin 5 (epidermolysis bullosa simplex, Dowling-Meara/Kobner/Weber-Cockayne types)	Both	161	0	Both methods	CCC, S
GROUP:KRT73	Yes	KRT73	Keratin 73	Both	4	6.08E-16	Both methods	S
GROUP:KRT76	Yes	KRT76	Keratin 76	Exclusion	3	0	Both methods	CCC
GROUP:KRT78	Yes	KRT78	Keratin 78	Exclusion	7	0	Both methods	S
GROUP:KRT79	Yes	KRT79	Keratin 79	Non-exclusion	2	1.54E-18	Both methods	CCC, S

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:KRT82	Yes	KRT82	Keratin 82	Both	6	0	Both methods	-
GROUP:KRT84	Yes	KRT84	Keratin 84	Exclusion	1	0.00123	Espresso only	O
GROUP:KRT9	Yes	KRT9	Keratin 9 (epidermolytic palmoplantar keratoderma)	Both	521	0	Both methods	CCC, I, S
IPI00020487		LACRT	Lacritin	Both	4	2.65E-36	Both methods	-
GROUP:LCN1	Yes	LCN1	Lipocalin 1 (tear prealbumin)	Exclusion	1	3.46E-12	Espresso only	-
GROUP:LCN2	Yes	LCN2	Lipocalin 2 (oncogene 24p3)	Exclusion	1	3.79E-16	Espresso only	U
IPI00297169		LCP2	Lymphocyte cytosolic protein 2 (SH2 domain containing leukocyte protein of 76kDa)	Exclusion	2	4.48E-08	Both methods	-
GROUP:LDHB	Yes	LDHB	Lactate dehydrogenase B	Both	32	0	Both methods	B, CCC, Me, U
IPI00465431		LGALS3	Lectin, galactoside-binding, soluble, 3	Non-exclusion	1	0.0000814	Espresso only	CCC, S, U
GROUP:LGALS3BP	Yes	LGALS3BP	Lectin, galactoside-binding, soluble, 3 binding protein	Both	31	0	Both methods	CCC, P, S, U
IPI00219221		LGALS7 LGALS7B	Lectin, galactose binding, soluble 7	Both	21	0	Both methods	S, Pa
GROUP:LGMN	Yes	LGMN	Legumain	Non-exclusion	1	1.40E-16	Espresso only	-
IPI00009950		LMAN2	Lectin, mannose-binding 2	Both	25	0	Both methods	U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00796067		LMBR1L	Limb region 1 homolog (mouse)-like	Non-exclusion	1	3.88E-07	Espresso only	-
IPI00103672		LOC100129503	Hypothetical protein LOC100129503	Exclusion	1	0.0037422	Espresso only	-
IPI00307761		LOC100132178	Hypothetical protein LOC100132178	Exclusion	1	6.98E-07	Espresso only	-
IPI00888515		LOC100287547	Hypothetical protein LOC100287547	Non-exclusion	1	0.00538	Espresso only	-
GROUP:LOC124220	Yes	LOC124220	Similar to common salivary protein 1	Exclusion	1	2.84E-17	Espresso only	Pa, U
GROUP:LOC198437	Yes	LOC198437	BA299N6.3	Non-exclusion	0	0.000013	Espresso only	-
GROUP:LOC259308	Yes	LOC259308	Hypothetical LOC259308	Exclusion	1	1.96E-07	Espresso only	-
IPI00293276		MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)	Exclusion	1	3.05E-38	Espresso only	B, CCC, TB, U
IPI00937151		LOC440335	Hypothetical gene supported by BC022385; BC035868; BC048326	Both	3	2.43E-38	Both methods	U
GROUP:LOC643951	Yes	LOC643951	Similar to Transmembrane protein 162	Exclusion	1	9.89E-08	Espresso only	-
IPI00787576		LOC644070	Similar to germ cell associated 1 isoform 2	Non-exclusion	3	1.03E-16	Both methods	-
IPI00740701		LOC644656	Hypothetical protein LOC644656	Exclusion	1	0.00829	Espresso only	-
IPI00888865		LOC728637	Similar to acyl-CoA synthetase long-chain family member 6	Both	7	0	Both methods	-
GROUP:LOC93349	Yes	LOC93349	Hypothetical protein BC004921	Non-exclusion	1	0.000639	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00008107		LRFN2	Leucine rich repeat and fibronectin type III domain containing 2	Exclusion	1	0.0009778	Espresso only	-
IPI00022417		LRG1	Leucine-rich alpha-2-glycoprotein 1	Exclusion	1	5.94E-06	Espresso only	-
IPI00917696		LRP1B	Low density lipoprotein-related protein 1B (deleted in tumors)	Exclusion	1	0.0003092	Espresso only	P
IPI00024292		LRP2	Low density lipoprotein-related protein 2	Both	12	0	Both methods	U
GROUP:LTF	Yes	LTF	Lactotransferrin	Exclusion	1	4.84E-16	Espresso only	B, S
IPI00019038		LYZ	Lysozyme (renal amyloidosis)	Both	16	0	Both methods	CCC, S, U
IPI00152487		MAGEE2	Melanoma antigen family E, 2	Both	5	2.23E-21	Both methods	-
IPI00844511		MAN1A1	Mannosidase, alpha, class 1A, member 1	Both	8	0	Both methods	CCC, U
GROUP:MAPK4	Yes	MAPK4	Mitogen-activated protein kinase 4	Exclusion	1	0.0049631	Espresso only	-
GROUP:MASP2	Yes	MASP2	Mannan-binding lectin serine peptidase 2	Both	35	0	Both methods	P, U
IPI00946481		MBNL1	Muscleblind-like (Drosophila)	Both	1	1.14E-12	Espresso only	-
IPI00946481		MBNL1	Muscleblind-like (Drosophila)	Both	2	5.49E-23	Both methods	-
GROUP:MCAT	Yes	MCAT	Malonyl CoA:ACP acyltransferase (mitochondrial)	Exclusion	1	1.39E-06	Espresso only	-
IPI00916431		MCF2L	MCF.2 cell line derived transforming sequence-	Exclusion	1	0.0001862	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
			like					
GROUP:MGAT5	Yes	MGAT5	Mannosyl (alpha-1,6-)-glycoprotein beta-1,6-N-acetyl-glucosaminyltransferase	Exclusion	1	0.0047913	Espresso only	-
IPI00103065		MITD1	MIT, microtubule interacting and transport, domain containing 1	Both	3	1.21E-18	Both methods	CCC, U
GROUP:MLX	Yes	MLX	MAX-like protein X	Non-exclusion	2	1.90E-28	Both methods	-
IPI00910964		MMD	Monocyte to macrophage differentiation-associated	Non-exclusion	1	3.17E-17	Espresso only	-
GROUP:MME	Yes	MME	Membrane metallo-endopeptidase	Both	86	0	Both methods	U
IPI00004489		MOCS3	Molybdenum cofactor synthesis 3	Non-exclusion	1	0.00891	Espresso only	-
GROUP:MPO	Yes	MPO	Myeloperoxidase	Exclusion	3	2.02E-18	Both methods	U
IPI00877839		MRPS17	Mitochondrial ribosomal protein S17	Non-exclusion	1	0.0030474	Espresso only	-
IPI00942799		MS4A4E	Membrane-spanning 4-domains, subfamily A, member 4E	Exclusion	1	0.0006638	Espresso only	-
GROUP:MTSS1	Yes	MTSS1	Metastasis suppressor 1	Exclusion	1	0.0000589	Espresso only	-
GROUP:MUC1	Yes	MUC1	Mucin 1, cell surface associated	Both	2	1.23E-09	Both methods	S, TB
IPI00918002		MUC5B	Mucin 5B, oligomeric mucus/gel-forming	Both	2	6.64E-06	Both methods	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:MYH1	Yes	MYH1	Myosin, heavy chain 1, non-muscle	Exclusion	3	4.69E-35	Both methods	-
GROUP:MYH10	Yes	MYH10	Myosin, heavy chain 10, non-muscle	Both	2	7.65E-07	Both methods	CCC
GROUP:MYH2	Yes	MYH2	Myosin, heavy chain 2, non-muscle	Exclusion	2	2.87E-06	Both methods	-
GROUP:MYH4	Yes	MYH4	Myosin, heavy chain 4, non-muscle	Exclusion	3	7.10E-38	Both methods	-
GROUP:MYH9	Yes	MYH9	Myosin, heavy chain 9, non-muscle	Both	3	2.04E-18	Both methods	CCC, M, P, S, U
IPI00002352		MYLPF	Fast skeletal myosin light chain 2	Exclusion	2	7.23E-23	Both methods	-
GROUP:NAALADL1	Yes	NAALADL1	N-acetylated alpha-linked acidic dipeptidase-like 1	Exclusion	1	0.0005712	Espresso only	-
IPI00007471		NACA2	Nascent polypeptide-associated complex alpha subunit 2	Non-exclusion	1	0.00426	Espresso only	-
GROUP:NAGLU	Yes	NAGLU	N-acetylglucosaminidase, alpha- (Sanfilippo disease IIIB)	Exclusion	4	0	Both methods	U
GROUP:NALCN	Yes	NALCN	Sodium leak channel, non-selective	Exclusion	1	0.0020017	Espresso only	-
GROUP:NAPSA	Yes	NAPSA	Napsin A aspartic peptidase	Both	10	0	Both methods	U
IPI00748534		NCRNA00107	PPP2R3B antisense RNA 1	Non-exclusion	1	1.29E-07	Espresso only	-
IPI00642734		NEK6	NIMA (never in mitosis gene a)-related kinase 6	Exclusion	1	2.73E-17	Espresso only	-
IPI00470875		NIPAL1	NIPA-like domain containing 1	Exclusion	1	0.000923	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:NKX2-1	Yes	NKX2-1	NK2 homeobox 1	Exclusion	1	0.000157	Espresso only	-
IPI00412982		NOTCH1	Notch homolog 1, translocation-associated (Drosophila)	Exclusion	1	0.0066901	Espresso only	CCC
GROUP:NPM1	Yes	NPM1	Nucleophosmin (nucleolar phosphoprotein B23, numatrin)	Non-exclusion	1	0.000193	Espresso only	U
IPI00306369		NSUN2	NOL1/NOP2/Sun domain family, member 2	Exclusion	1	1.69E-15	Espresso only	-
GROUP:NT5C	Yes	NT5C	5', 3'-nucleotidase, cytosolic	Both	2	6.89E-06	Both methods	U
GROUP:NT5DC3	Yes	NT5DC3	5'-nucleotidase domain containing 3	Exclusion	1	5.86E-07	Espresso only	-
GROUP:NUAK1	Yes	NUAK1	NUAK family, SNF1-like kinase, 1	Non-exclusion	4	0	Both methods	-
IPI00103142		NUDCD2	NudC domain containing 2	Non-exclusion	2	0.0000113	Both methods	-
GROUP:NUTF2	Yes	NUTF2	Nuclear transport factor 2	Both	5	0	Both methods	U
IPI00218116		OASL	2'-5'-oligoadenylate synthetase-like	Non-exclusion	1	0.0003353	Espresso only	-
IPI00554443		OBFC1	Oligonucleotide/oligosaccharide-binding fold containing 1	Exclusion	1	6.17E-13	Espresso only	-
IPI00022255		OLFM4	Olfactomedin 4	Both	77	0	Both methods	S, U
IPI00556491		ONECUT3	One cut homeobox 3	Exclusion	1	0.0038407	Espresso only	-
IPI00169254		OR14C36	Olfactory receptor, family 14, subfamily C,	Exclusion	1	1.06E-13	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
			member 36					
IPI00073066		OR1F2P	Olfactory receptor, family 1, subfamily F, member 2	Exclusion	2	3.45E-07	Both methods	-
IPI00183993		OR2M5	Olfactory receptor, family 2, subfamily M, member 5	Exclusion	1	0.00154	Espresso only	-
IPI00375736		OR5B2	Olfactory receptor, family 5, subfamily B, member 2	Exclusion	1	6.72E-07	Espresso only	-
IPI00171603		OR7E91P	Olfactory receptor, family 7, subfamily E, member 91 pseudogene	Non-exclusion	1	3.13E-06	Espresso only	-
IPI00169151		OR8K5	Olfactory receptor, family 8, subfamily K, member 5	Exclusion	1	0.00769	Espresso only	-
IPI00923610		OTOF	Otoferlin	Exclusion	1	3.85E-06	Espresso only	-
GROUP:OTOL1	Yes	OTOL1	Otolin 1	Exclusion	1	0.00706	Espresso only	-
IPI00329572		PACSIN3	Protein kinase C and casein kinase substrate in neurons 3	Both	2	4.08E-38	Both methods	U
IPI00418630		PAPD7	PAP associated domain containing 7	Exclusion	1	0.00263	Espresso only	-
IPI00910435		PBRM1	Polybromo 1	Exclusion	1	0.0000978	Espresso only	-
IPI00299402		PC	Pyruvate carboxylase	Exclusion	1	1.06E-08	Espresso only	CCC, S
GROUP:PCCA	Yes	PCCA	Propionyl Coenzyme A carboxylase, alpha	Both	2	1.00E-11	Both methods	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
			polypeptide					
IPI00647500		PCCA	Propionyl Coenzyme A carboxylase, alpha polypeptide	Both	2	1.67E-20	Both methods	-
IPI00168563		PCGF3	Polycomb group ring finger 3	Non-exclusion	1	0.000648	Espresso only	-
GROUP:PDDC1	Yes	PDDC1	Parkinson disease 7 domain containing 1	Both	2	4.82E-15	Both methods	U
GROUP:PDZD4	Yes	PDZD4	PDZ domain containing 4	Exclusion	1	0.00681	Espresso only	-
IPI00011858		PDZK1IP1	PDZK1 interacting protein 1	Both	5	0	Both methods	U
GROUP:PEBP1	Yes	PEBP1	Phosphatidylethanolamine binding protein 1	Exclusion	1	1.90E-17	Espresso only	CCC, S, U
IPI00018235		PEF1	Penta-EF-hand domain containing 1	Both	18	0	Both methods	U
IPI00216691		PFN1	Profilin 1	Both	4	0	Both methods	B, CCC, U
GROUP:PGK1	Yes	PGK1	Phosphoglycerate kinase 1	Non-exclusion	2	0.0000751	Both methods	CCC, I, S, U
GROUP:PGLS	Yes	PGLS	6-phosphogluconolactonase	Both	4	0	Both methods	U
IPI00021085		PGLYRP1	Peptidoglycan recognition protein 1	Both	2	4.19E-23	Both methods	U
GROUP:PGM5P1	Yes	PGM5P1	Phosphoglucomutase 5 pseudogene 1	Non-exclusion	1	0.0000154	Espresso only	-
IPI00792870		PHF1	PHD finger protein 1	Exclusion	2	1.23E-14	Both methods	-
GROUP:PIB5PA	Yes	PIB5PA	Phosphatidylinositol (4,5) bisphosphate 5-	Non-exclusion	1	7.98E-07	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
			phosphatase, A					
GROUP:PIGR	Yes	PIGR	Polymeric immunoglobulin receptor	Both	135	0	Both methods	P, S, U
GROUP:PKP1	Yes	PKP1	Plakophilin 1 (ectodermal dysplasia/skin fragility syndrome)	Exclusion	2	2.03E-09	Both methods	-
GROUP:PKP3	Yes	PKP3	Plakophilin 3	Non-exclusion	1	0.0011305	Espresso only	-
IPI00925427		PLA2G4B	Phospholipase A2, group IVB (cytosolic)	Non-exclusion	1	3.51E-26	Espresso only	-
IPI00925632		PLCD1	Phospholipase C, delta 1	Non-exclusion	1	0.0015779	Espresso only	U
IPI00009856		PLUNC	Palate, lung and nasal epithelium carcinoma associated	Exclusion	4	0	Both methods	-
GROUP:POF1B	Yes	POF1B	Premature ovarian failure, 1B	Non-exclusion	2	2.34E-13	Both methods	-
GROUP:POU2F1	Yes	POU2F1	POU class 2 homeobox 1	Non-exclusion	1	1.10E-06	Espresso only	-
GROUP:PPIB	Yes	PPIB	Peptidylprolyl isomerase B (cyclophilin B)	Non-exclusion	1	2.46E-20	Espresso only	CCC, S, U
IPI00024129		PPIC	Peptidylprolyl isomerase C (cyclophilin C)	Non-exclusion	1	0.000019	Espresso only	N
GROUP:PPL	Yes	PPL	Periplakin	Exclusion	3	9.11E-27	Both methods	S, U
GROUP:PRAMEF21; PRAMEF20	Yes	PRAMEF21; PRAMEF20	PRAME family member 21	Non-exclusion	1	0.0089765	Espresso only	-
IPI00023038		PRB1	Proline-rich protein BstNI subfamily 1	Exclusion	1	1.45E-06	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00797380		PRCD	Progressive rod-cone degeneration	Exclusion	1	1.19E-06	Espresso only	-
GROUP:PRDX1	Yes	PRDX1	Peroxiredoxin 1	Both	3	0	Both methods	BCCC, B, CCC, S
GROUP:PRDX5	Yes	PRDX5	Peroxiredoxin 5	Both	4	0	Both methods	CCC, S, U
IPI00220301		PRDX6	Peroxiredoxin 6	Both	9	0	Both methods	CCC, S, U
GROUP:PRIC285	Yes	PRIC285	Peroxisomal proliferator-activated receptor A interacting complex 285	Non-exclusion	1	0.0042504	Espresso only	-
IPI00009276		PROCR	Protein C receptor, endothelial (EPCR)	Both	4	9.99E-25	Both methods	-
IPI00909774		PRPF40A	PRP40 pre-mRNA processing factor 40 homolog A (<i>S. cerevisiae</i>)	Both	2	2.76E-07	Both methods	-
IPI00909774		PRPF40A	PRP40 pre-mRNA processing factor 40 homolog A (<i>S. cerevisiae</i>)	Both	3	2.45E-15	Both methods	-
IPI00915929		PRPF40A	PRP40 pre-mRNA processing factor 40 homolog A (<i>S. cerevisiae</i>)	Both	3	1.38E-13	Both methods	-
IPI00915929		PRPF40A	PRP40 pre-mRNA processing factor 40 homolog A (<i>S. cerevisiae</i>)	Both	2	0.0000155	Both methods	-
IPI00027019		PRR4	Proline rich 4	Both	2	0	Both methods	-
GROUP:PRSS7	Yes	PRSS7	Protease, serine, 7 (enterokinase)	Non-exclusion	1	0.0053887	Espresso only	-
IPI00329538		PRSS8	Protease, serine, 8	Exclusion	2	0	Both methods	S, U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:PSCA	Yes	PSCA	Prostate stem cell antigen	Both	11	0	Both methods	U
GROUP:PSPC1	Yes	PSPC1	Paraspeckle component 1	Exclusion	1	0.0021192	Espresso only	-
GROUP:PTBP1	Yes	PTBP1	Polypyrimidine tract binding protein 1	Exclusion	6	0	Both methods	U
GROUP:PTGER3	Yes	PTGER3	Prostaglandin E receptor 3 (subtype EP3)	Exclusion	1	0.000339	Espresso only	-
IPI00000940		PTH	Parathyroid hormone	Non-exclusion	1	2.21E-08	Espresso only	-
GROUP:PTPRJ	Yes	PTPRJ	Protein tyrosine phosphatase, receptor type, J	Exclusion	2	6.00E-09	Both methods	U
IPI00747534		PYCR2	Pyrroline-5-carboxylate reductase family, member 2	Exclusion	1	0.0008554	Espresso only	-
GROUP:PYGB	Yes	PYGB	Phosphorylase, glycogen; brain	Both	2	0.0011184	Two peptide rule only	CCC
GROUP:PYGM	Yes	PYGM	Phosphorylase, glycogen; muscle (McArdle syndrome, glycogen storage disease type V)	Both	16	0	Both methods	-
GROUP:RAB10	Yes	RAB10	RAB10, member RAS oncogene family	Both	4	0	Both methods	CCC, U
GROUP:RAB13	Yes	RAB13	RAB13, member RAS oncogene family	Non-exclusion	1	8.25E-08	Espresso only	CCC, U
GROUP:RAB14	Yes	RAB14	RAB14, member RAS oncogene family	Both	12	0	Both methods	CCC, Fe, U
GROUP:RAB15	Yes	RAB15	RAB15, member RAS onocogene family	Both	6	0	Both methods	CCC, U
GROUP:RAB21	Yes	RAB21	RAB21, member RAS oncogene family	Both	2	1.21E-26	Both methods	U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:RAB35	Yes	RAB35	RAB35, member RAS oncogene family	Both	3	0	Both methods	CCC, U
GROUP:RAB5B	Yes	RAB5B	RAB5B, member RAS oncogene family	Non-exclusion	1	4.54E-16	Espresso only	CCC, Me, P, U
GROUP:RAB5C	Yes	RAB5C	RAB5C, member RAS oncogene family	Both	12	0	Both methods	CCC, S, U
GROUP:RAB8A	Yes	RAB8A	RAB8A, member RAS oncogene family	Non-exclusion	1	7.25E-06	Espresso only	CCC, U
GROUP:RAB8B	Yes	RAB8B	RAB8B, member RAS oncogene family	Exclusion	1	9.98E-16	Espresso only	CCC, U
GROUP:RAC1	Yes	RAC1	Ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)	Both	2	0	Both methods	CCC, U
GROUP:RAP1A	Yes	RAP1A	RAP1A, member of RAS oncogene family	Exclusion	1	0.0000754	Espresso only	CCC
GROUP:RAP1B	Yes	RAP1B	RAP1B, member of RAS oncogene family	Exclusion	1	5.34E-08	Espresso only	CCC, S, U
GROUP:RAP2B	Yes	RAP2B	RAP2B, member of RAS oncogene family	Both	3	3.22E-37	Both methods	CCC, U
IPI00893458		RAPGEF5	Rap guanine nucleotide exchange factor (GEF) 5	Exclusion	1	5.15E-08	Espresso only	-
GROUP:RASGEF1A	Yes	RASGEF1A	RasGEF domain family, member 1A	Non-exclusion	1	5.88E-06	Espresso only	-
GROUP:RAVER2	Yes	RAVER2	Ribonucleoprotein, PTB-binding 2	Non-exclusion	2	1.68E-09	Both methods	-
GROUP:RBMS3	Yes	RBMS3	RNA binding motif, single stranded interacting protein	Non-exclusion	1	0.0016	Espresso only	MC
IPI00938339		RBMX	RNA binding motif protein, X-linked	Exclusion	2	1.51E-15	Both methods	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00167369		RBMXL3	RNA binding motif protein, X-linked-like 3	Non-exclusion	1	0.0000196	Espresso only	-
IPI00640136		RFX7	Regulatory factor X, 7	Exclusion	1	0.0003863	Espresso only	MC
IPI00251559		RNF20	Ring finger protein 20	Non-exclusion	1	2.27E-07	Espresso only	-
IPI00011044		RP1	Retinitis pigmentosa 1 (autosomal dominant)	Exclusion	1	1.17E-06	Espresso only	-
GROUP:GABPB2	Yes	GABPB2	GA binding protein transcription factor, beta subunit 2	Exclusion	1	0.0035783	Espresso only	-
GROUP:RP5-1022P6.2	Yes	RP5-1022P6.2	Hypothetical protein KIAA1434	Exclusion	1	3.27E-08	Espresso only	-
GROUP:RPS14	Yes	RPS14	Ribosomal protein S14	Non-exclusion	1	2.01E-17	Espresso only	CCC
IPI00008433		RPS5	Ribosomal protein S5	Non-exclusion	1	2.33E-09	Espresso only	MC
IPI00221088		RPS9	Ribosomal protein S9	Non-exclusion	1	2.79E-30	Espresso only	-
IPI00020418		RRAS	Related RAS viral (r-ras) oncogene homolog	Non-exclusion	2	1.70E-25	Both methods	CCC, U
IPI00006541		RSPH6A	Radial spoke head 6 homolog A	Exclusion	1	0.0033614	Espresso only	-
IPI00034010		RWDD1	RWD domain containing 1	Non-exclusion	1	0.000263	Espresso only	-
GROUP:RYR2	Yes	RYR2	Ryanodine receptor 2 (cardiac)	Exclusion	1	0.0001449	Espresso only	-
GROUP:S100A11	Yes	S100A11	S100 calcium binding protein A11	Both	3	0	Both methods	CCC, S, U
IPI00218131		S100A12	S100 calcium binding protein A12	Exclusion	1	0.00563	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00027463		S100A6	S100 calcium binding protein A6	Non-exclusion	4	7.84E-21	Both methods	CCC, S, U
GROUP:S100A7	Yes	S100A7	S100 calcium binding protein A7	Both	5	0	Both methods	-
IPI00007047		S100A8	S100 calcium binding protein A8	Both	11	0	Both methods	S, U
IPI00027462		S100A9	S100 calcium binding protein A9	Both	8	0	Both methods	S, U
IPI00017526		S100P	S100 calcium binding protein P	Both	2	4.46E-19	Both methods	CCC, U
IPI00798360		SARNP	SAP domain containing ribonucleoprotein	Non-exclusion	1	2.59E-21	Espresso only	-
IPI00947285		SBSN	Suprabasin	Exclusion	4	0	Both methods	S
IPI00217766		SCARB2	Scavenger receptor class B, member 2	Non-exclusion	1	0.000167	Espresso only	U
IPI00413194		SCFV	Single-chain Fv fragment	Non-exclusion	1	4.66E-16	Espresso only	S
IPI00026126		SCGB2A1	Secretoglobulin, family 2A, member 1	Both	3	0	Both methods	-
IPI00300117		SCN7A	Sodium channel, voltage-gated, type VII, alpha	Both	2	5.65E-12	Both methods	-
GROUP:SCPEP1	Yes	SCPEP1	Serine carboxypeptidase 1	Exclusion	1	0.0002755	Espresso only	S, U
IPI00011564		SDC4	Syndecan 4	Exclusion	3	5.18E-14	Both methods	CCC, S
IPI00170635		SECTM1	Secreted and transmembrane 1	Both	2	0	Both methods	U
GROUP:SEMG2	Yes	SEMG2	Semenogelin II	Exclusion	1	0	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:SERPINA1	Yes	SERPINA1	Serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1	Both	4	0	Both methods	CCC, P, U
GROUP:SERPINA13	Yes	SERPINA13	Serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 13 (pseudogene)	Non-exclusion	1	0.0009138	Espresso only	-
IPI00007221		SERPINA5	Serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 5	Both	6	0	Both methods	U
IPI00292946		SERPINA7	Serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 7	Exclusion	2	3.54E-15	Both methods	U
GROUP:SERPINB12	Yes	SERPINB12	Serpin peptidase inhibitor, clade B (ovalbumin), member 12	Exclusion	2	6.88E-22	Both methods	-
GROUP:SERPINB4	Yes	SERPINB4	Serpin peptidase inhibitor, clade B (ovalbumin), member 4	Both	3	2.56E-19	Both methods	U
GROUP:SERPING1	Yes	SERPING1	Serpin peptidase inhibitor, clade G (C1 inhibitor), member 1, (angioedema, hereditary)	Both	10	0	Both methods	P, U
GROUP:SFN	Yes	SFN	Stratifin	Exclusion	14	0	Both methods	CCC, K, U
IPI00795239		SGCZ	Sarcoglycan zeta	Non-exclusion	1	2.39E-06	Espresso only	-
IPI00879791		SH2B2	SH2B adaptor protein 2	Exclusion	1	4.37E-10	Espresso only	-
IPI00872618		SH3BGL3	SH3 domain binding glutamic acid-rich protein like 3	Non-exclusion	1	0.00666	Espresso only	U
GROUP:SH3GL2	Yes	SH3GL2	SH3-domain GRB2-like 2	Non-exclusion	2	0	Both methods	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:SH3KBP1	Yes	SH3KBP1	SH3-domain kinase binding protein 1	Non-exclusion	2	8.09E-08	Both methods	-
GROUP:SHOX	Yes	SHOX	Short stature homeobox	Exclusion	1	0.00743	Espresso only	-
IPI00946734		SLC12A8	Solute carrier family 12 (potassium/chloride transporters), member 8	Exclusion	1	0.0005679	Espresso only	-
IPI00807688		SLC22A12	Solute carrier family 22 (organic anion/cation transporter), member 12	Exclusion	1	0.00028	Espresso only	U
GROUP:SLC30A9	Yes	SLC30A9	Solute carrier family 30 (zinc transporter), member 9	Exclusion	1	0.0001164	Espresso only	-
IPI00099939		SLC35C2	Solute carrier family 35, member C2	Exclusion	1	5.59E-09	Espresso only	-
GROUP:SLC38A4	Yes	SLC38A4	Solute carrier family 38, member 4	Exclusion	1	0.0041818	Espresso only	-
IPI00094624		SLC38A8	Solute carrier family 38, member 8	Non-exclusion	1	0.0000984	Espresso only	-
GROUP:SLC41A3	Yes	SLC41A3	Solute carrier family 41, member 3	Non-exclusion	2	2.35E-20	Both methods	-
IPI00218248		SLC5A4	Solute carrier family 5 (low affinity glucose cotransporter), member 4	Exclusion	1	0.0005436	Espresso only	-
GROUP:SLC7A4	Yes	SLC7A4	Solute carrier family 7 (cationic amino acid transporter, γ^+ system), member 4	Exclusion	1	0.00221	Espresso only	-
IPI00043337		SLMO1	Slowmo homolog 1 (Drosophila)	Exclusion	1	0.00933	Espresso only	-
GROUP:SMARCC1	Yes	SMARCC1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c,	Exclusion	0	0.0001018	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
			member 1					
GROUP:SMN1; SMN2;	Yes	SMN1; SMN2; LOC100133835 ; LOC100133836	Survival of motor neuron 1, telomeric	Exclusion	1	7.71E-09	Espresso only	-
IPI00550115		SMPDL3B	Sphingomyelin phosphodiesterase, acid-like 3B	Non-exclusion	1	4.86E-16	Espresso only	CCC, U
GROUP:SMR3B	Yes	SMR3B	Submaxillary gland androgen regulated protein 3 homolog B (mouse)	Exclusion	2	2.62E-18	Both methods	-
IPI00220528		SNRPF	Small nuclear ribonucleoprotein polypeptide F	Non-exclusion	1	0.0012027	Espresso only	-
GROUP:SNRPN	Yes	SNRPN	Small nuclear ribonucleoprotein polypeptide N	Non-exclusion	1	4.83E-08	Espresso only	-
IPI00001885		SNX8	Sorting nexin 8	Non-exclusion	1	0.0001285	Espresso only	-
GROUP:SOBP	Yes	SOBP	Sine oculis binding protein homolog (Drosophila)	Non-exclusion	1	7.78E-06	Espresso only	-
GROUP:SOD1	Yes	SOD1	Superoxide dismutase 1, soluble (amyotrophic lateral sclerosis 1 (adult))	Exclusion	2	3.17E-06	Both methods	CCC, U
IPI00027827		SOD3	Superoxide dismutase 3, extracellular	Both	5	0	Both methods	-
GROUP:SORD	Yes	SORD	Sorbitol dehydrogenase	Exclusion	2	0	Both methods	U
GROUP:SOX3	Yes	SOX3	SRY (sex determining region Y)-box 3	Both	2	0.0000168	Both methods	-
GROUP:SPATA7	Yes	SPATA7	Spermatogenesis associated 7	Both	4	1.18E-25	Both methods	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
IPI00915976		SPATS2L	Spermatogenesis associated, serine-rich 2-like	Exclusion	1	0.00168	Espresso only	-
GROUP:SPEG	Yes	SPEG	SPEG complex locus	Exclusion	1	3.99E-16	Espresso only	-
GROUP:SPTBN2	Yes	SPTBN2	Spectrin, beta, non-erythrocytic 2	Exclusion	1	3.71E-13	Espresso only	-
IPI00241148		SSBP4	Single stranded DNA binding protein 4	Both	2	8.22E-08	Both methods	-
IPI00241148		SSBP4	Single stranded DNA binding protein 4	Both	2	3.31E-06	Both methods	-
IPI00793211		ST13	Suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein)	Exclusion	1	0.0000719	Espresso only	U
GROUP:STOM	Yes	STOM	Stomatin	Non-exclusion	3	9.07E-25	Both methods	B, TB, U
GROUP:STT3B	Yes	STT3B	STT3, subunit of the oligosaccharyltransferase complex, homolog B (<i>S. cerevisiae</i>)	Exclusion	1	0.0031163	Espresso only	-
IPI00021302		SUSD2	Sushi domain containing 2	Exclusion	2	2.09E-24	Both methods	U
GROUP:SVOP	Yes	SVOP	SV2 related protein homolog (rat)	Non-exclusion	1	1.17E-13	Espresso only	-
IPI00651630		TAAR2	Trace amine associated receptor 2	Exclusion	1	0.00683	Espresso only	-
IPI00879057		TAF3	TAF3 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 140kDa	Both	8	0	Both methods	-
IPI00643828		TDRD3	Tudor domain containing 3	Both	1	1.59E-21	Espresso only	-
IPI00065229		TEKT5	Tektin 5	Exclusion	1	5.38E-06	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:TF	Yes	TF	Transferrin	Both	23	0	Both methods	CCC, U
IPI00029174		TGIF2	TGFB-induced factor homeobox 2	Non-exclusion	1	4.44E-16	Espresso only	-
IPI00300376		TGM3	Transglutaminase 3 (E polypeptide, protein-glutamine-gamma-glutamyltransferase)	Exclusion	1	1.62E-10	Espresso only	S
GROUP:THBS1	Yes	THBS1	Thrombospondin 1	Exclusion	2	8.40E-13	Both methods	CCC, P, S, U
GROUP:THRA	Yes	THRA	Thyroid hormone receptor, alpha (erythroblastic leukemia viral (v-erb-a) oncogene homolog, avian)	Non-exclusion	1	2.58E-08	Espresso only	-
GROUP:TLE3	Yes	TLE3	Transducin-like enhancer of split 3 (E(sp1) homolog, Drosophila)	Exclusion	2	1.97E-07	Both methods	-
IPI00791212		TM6SF1	Transmembrane 6 superfamily member 1	Non-exclusion	1	0.00199	Espresso only	-
IPI00395888		TMEM123	Transmembrane protein 123	Exclusion	1	3.61E-07	Espresso only	-
IPI00009441		TMEM216	Transmembrane protein 216	Both	11	0	Both methods	-
IPI00375577		TMEM65	Transmembrane protein 65	Exclusion	1	0.0007594	Espresso only	-
GROUP:TMTC1	Yes	TMTC1	Transmembrane and tetratricopeptide repeat containing 1	Both	9	0	Both methods	-
IPI00100247		TMX4	thioredoxin-related transmembrane protein 4	Both	7	0	Both methods	-
GROUP:TNNI3K	Yes	TNNI3K	TNNI3 interacting kinase	Exclusion	1	0.0026919	Espresso only	-

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IPI00940106		TOX2	TOX high mobility group box family member 2	Non-exclusion	1	0.00719	Espresso only	-
GROUP:TPCN1	Yes	TPCN1	Two pore segment channel 1	Exclusion	1	7.16E-07	Espresso only	-
GROUP:TPM2	Yes	TPM2	Tropomyosin 2 (beta)	Exclusion	1	4.55E-06	Espresso only	-
GROUP:TRAFD1	Yes	TRAFD1	TRAF-type zinc finger domain containing 1	Non-exclusion	2	0.0000102	Both methods	-
GROUP:TRIM5	Yes	TRIM5	Tripartite motif-containing 5	Non-exclusion	1	2.19E-19	Espresso only	-
IPI00926749		TRIP6	Thyroid hormone receptor interactor 6	Non-exclusion	1	0.0015232	Espresso only	-
GROUP:TSC22D2	Yes	TSC22D2	TSC22 domain family, member 2	Both	2	9.99E-08	Both methods	-
GROUP:TSG101	Yes	TSG101	Tumor susceptibility gene 101	Both	10	0	Both methods	CCC, TB, U
IPI00877047		TSHR	Thyroid stimulating hormone receptor	Exclusion	1	0.0004033	Espresso only	-
IPI00030936		TSPAN1	Tetraspanin 1	Both	2	4.15E-10	Both methods	CCC, TB, U
IPI00296805		TSPAN10	Tetraspanin 10	Non-exclusion	1	0.0036006	Espresso only	-
IPI00514593		TTC4	Tetratricopeptide repeat domain 4	Non-exclusion	0	1.88E-08	Espresso only	-
IPI00023234		UBA2	SUMO1 activating enzyme subunit 2	Non-exclusion	1	0.0073359	Espresso only	-
GROUP:UBR2	Yes	UBR2	Ubiquitin protein ligase E3 component n-recogin 2	Non-exclusion	2	4.09E-20	Both methods	MC
GROUP:UMOD	Yes	UMOD	Uromodulin (uromucoid, Tamm-Horsfall	Exclusion	169	0	Both methods	U

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			glycoprotein)					
IPI00012113		UPK2	Uroplakin 2	Both	9	0	Both methods	U
IPI00289920		UPK3A	Uroplakin 3A	Exclusion	1	3.94E-06	Espresso only	U
GROUP:USH1C	Yes	USH1C	Usher syndrome 1C (autosomal recessive, severe)	Exclusion	1	0.00363	Espresso only	-
GROUP:USP6	Yes	USP6	Ubiquitin specific peptidase 6 (Tre-2 oncogene)	Non-exclusion	1	1.64E-13	Espresso only	-
GROUP:VAPA	Yes	VAPA	VAMP (vesicle-associated membrane protein)-associated protein A, 33kDa	Non-exclusion	1	4.82E-16	Espresso only	MC
IPI00395488		VASN	Vasorin	Both	13	0	Both methods	U
IPI00383676		VGLL1	Vestigial like 1 (Drosophila)	Non-exclusion	1	0.0028287	Espresso only	-
IPI00783024		VH87-2	immunoglobulin heavy variable 3-15	Non-exclusion	7	0	Both methods	-
GROUP:VIM	Yes	VIM	Vimentin	Exclusion	1	0.0010829	Espresso only	N
IPI00166079		VKORC1L1	Vitamin K epoxide reductase complex, subunit 1-like 1	Exclusion	1	0.0000769	Espresso only	-
IPI00382436		VL4		Non-exclusion	1	2.29E-31	Espresso only	-
GROUP:VMO1	Yes	VMO1	Vitelline membrane outer layer 1 homolog (chicken)	Exclusion	1	4.62E-16	Espresso only	U

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GROUP:VPS28	Yes	VPS28	Vacuolar protein sorting 28 homolog (S. cerevisiae)	Both	16	0	Both methods	CCC, S, U
GROUP:VPS37B	Yes	VPS37B	Vacuolar protein sorting 37 homolog B (S. cerevisiae)	Both	17	0	Both methods	CCC, U
IPI00401773		VPS37C	Vacuolar protein sorting 37 homolog C (S. cerevisiae)	Non-exclusion	1	6.32E-07	Espresso only	CCC, U
GROUP:VPS4A	Yes	VPS4A	Vacuolar protein sorting 4 homolog A (S. cerevisiae)	Both	11	0	Both methods	S, U
GROUP:VPS4B	Yes	VPS4B	Vacuolar protein sorting 4 homolog B (S. cerevisiae)	Both	13	0	Both methods	U
IPI00216313		VSNL1	Visinin-like 1	Non-exclusion	1	1.58E-06	Espresso only	-
GROUP:VTA1	Yes	VTA1	Vps20-associated 1 homolog (S. cerevisiae)	Exclusion	2	2.85E-35	Both methods	S, U
IPI00298971		VTN	Vitronectin	Both	12	0	Both methods	P, S, U
IPI00797789		WBP2	WW domain binding protein 2	Exclusion	1	0.0000451	Espresso only	-
GROUP:XPNPEP2	Yes	XPNPEP2	X-prolyl aminopeptidase (aminopeptidase P) 2, membrane-bound	Both	24	0	Both methods	U
IPI00553187		YIPF6	Yip1 domain family, member 6	Exclusion	1	1.50E-06	Espresso only	-
GROUP:YWHAB	Yes	YWHAB	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, beta polypeptide	Both	13	0	Both methods	CCC, S, U

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:YWHAE	Yes	YWHAE	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, epsilon polypeptide	Both	13	0	Both methods	CCC, Me, S, U
GROUP:YWHAG	Yes	YWHAG	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, gamma polypeptide	Non-exclusion	1	0.0000289	Espresso only	CCC, S, U
GROUP:YWHAQ	Yes	YWHAQ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, theta polypeptide	Exclusion	3	4.86E-36	Both methods	CCC, S, U
GROUP:YWHAZ	Yes	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide	Both	27	0	Both methods	CCC, S, TB, U
GROUP:ZBTB10	Yes	ZBTB10	Zinc finger and BTB domain containing 10	Exclusion	1	0.000193	Espresso only	-
IPI00455725		ZC3H11A LOC441155	Zinc finger CCCH-type containing 11A	Both	2	6.16E-10	Both methods	-
IPI00307325		ZFP161	Zinc finger protein 161 homolog (mouse)	Exclusion	1	1.08E-07	Espresso only	-
IPI00293575		ZNF184	Zinc finger protein 184	Non-exclusion	1	0.0020634	Espresso only	-
IPI00902668		ZNF268	Zinc finger protein 268	Exclusion	1	0.000443	Espresso only	-
GROUP:ZNF282	Yes	ZNF282	Zinc finger protein 282	Non-exclusion	2	2.95E-06	Both methods	-
IPI00141925		ZNF296	Zinc finger protein 296	Non-exclusion	1	0.0006851	Espresso only	-
IPI00879271		ZNF355P	Zinc finger protein 355P	Non-exclusion	1	0.0065168	Espresso only	-

Protein Identifier	Dis-ambiguated	Gene Name	Description	Exclusion List	Peptide Count	Type I Error	Identification Method	Previously Identified in Exosomes*
GROUP:ZNF41	Yes	ZNF41	Zinc finger protein 41	Exclusion	1	4.04E-06	Espresso only	-
IPI00922712		ZNF418	Zinc finger protein 418	Non-exclusion	1	2.39E-11	Espresso only	-
IPI00745436		ZNF451	Zinc finger protein 451	Non-exclusion	1	0.00135	Espresso only	-
IPI00073580		ZNF689	Zinc finger protein 689	Exclusion	1	0.0002782	Espresso only	-
GROUP:ZSWIM4	Yes	ZSWIM4	Zinc finger, SWIM-type containing 4	Exclusion	1	0.00231	Espresso only	-

* A	Amniotic fluid	M	Mesothelioma cells
B	Breast milk	MC	Mast cells
BC	B cells	Me	Melanoma cells
BCC	Breast cancer cells	N	Neuroglial cells
CC	Colorectal cells	O	Oligodendrocytes
CCC:	Colorectal cancer cells	P	Plasma
Fe	Embryonic fibroblasts	Pa	Parotid gland
H	Hepatocytes	S	Saliva
I	Intestinal epithelial cells	SF	Synovial fluid
K	Keratinocytes	TB	Tracehobronchila cells
MPE	Malignant pleural effusions	U	Urine