**Supplementary Material**

**Supplementary Methods**

**RNA extraction**

RNA was extracted from PBMC using Trizol (Invitrogen, Carlsbad, CA, USA) [1] coupled with glycogen as a carrier during RNA precipitation. The RNA cleanup protocol [2] was used to remove residual Trizol while concentrating RNA. RNA concentration and purity were determined using the Nanodrop ND-1000 (Nanodrop Technologies, Wilmington, Delaware, USA). A cut-off of OD260nm/280nm ratio >1.8 (‘pure RNA’) was used for the downstream nCounter assays. In addition, RNA integrity (RIN >7) was assessed using a Bioanalyser 2100 (Agilent, Santa Clara, California, USA). An aliquot of 100ng of total RNA was used for NanoString nCounter analysis (www.nucleomics.be) according to the manufacturer’s instructions and as described [3].

**ELISA**

Briefly, 100 μl of the standard, samples, or controls were transferred in duplicate into appropriate wells and the plate was incubated for one hour at room temperature. The plate was washed, 100 μl of diluted tracer added and incubated for one hour at room temperature. After another wash, 100 μl of diluted streptavidin-peroxidase was pipetted onto the plate and incubated at room temperature for an hour. The plate was washed and 100 μl of TMB substrate was added. The reaction was stopped with 100 μl of stop solution after a thirty-minute incubation at room temperature. The plate was read at 450 nm using a plate reader, following the manufacturer’s instructions.

**Immunohistochemistry of lymph node sections**

Methods for immunohistochemistry were previously reported [4]. Briefly, patients with a diagnosis of TB lymphadenitis HIV+ IRIS+ (cases, n=3) were included into the study. TB-IRIS was defined using the INSHI criteria [5]. Formalin fixed paraffin embedded (FFPE) block sections (4-6 micron thickness) of LN biopsies underwent standard hematoxylin and eosin staining. Further sections underwent polyclonal rabbit anti-human IL-10 (1:2000; Abcam) or monoclonal mouse anti-human CD15 (LeuM1, 1:50; Abcam) staining followed by either horseradish peroxidase–conjugated polyclonal goat anti-mouse or anti-rabbit (Dako) secondary antibodies (Dako). Chromogenic DAB staining (Liquid DAB+; Dako) was used to visualize the antibodies. The slides were mounted onto an Olympus VS120 Scanning Microscope (Olympus, Tokyo, Japan) and the respective objectives as indicated were used to capture the images.

**References**

1. Chomczynski, P., *A reagent for the single-step simultaneous isolation of RNA, DNA and proteins from cell and tissue samples.* Biotechniques, 1993. **15**(3): p. 532-4, 536-7.

2. Krebs, S., M. Fischaleck, and H. Blum, *A simple and loss-free method to remove TRIzol contaminations from minute RNA samples.* Anal Biochem, 2009. **387**(1): p. 136-8.

3. Lai, R.P., et al., *HIV-tuberculosis-associated immune reconstitution inflammatory syndrome is characterized by Toll-like receptor and inflammasome signalling.* Nat Commun, 2015. **6**: p. 8451.

4. Diedrich, C.R., et al., *Relationship between HIV-1 co-infection, IL-10, and M. tuberculosis in human lymph node granulomas.* J Infect Dis, 2016. **214**(9): p. 1309-1318.

5. Meintjes, G., et al., *Tuberculosis-associated immune reconstitution inflammatory syndrome: case definitions for use in resource-limited settings.* Lancet Infect Dis, 2008. **8**(8): p. 516-23.

**Supplementary Table 1: Baseline characteristics of included patients**

|  |  |  |
| --- | --- | --- |
|  | Median Value (IQR)a**Cohort 1 (recruited****for NanoString nCounter gene expression analysis** |  |
|  | Non-IRIS Controls  | TB-IRIS Patients  |  |
| Characteristic | (n =17 ) | (n = 17) |  p valueb |
| Age, years | 36 (28-40) | 32 (30-43) | 0.43 |
| Sex (Male), No. (%) | 9 (52.9) | 10 (58.8) | >0.99 |
| Temperature (0C) | 36.0 (35.5-36.8) | 36.5 (35.7-37.1) | 0.27 |
| IRIS episode presentation, days | n/a | 14 (10-15) |  |
| CD4 count, cells/μLc | 24 (12-57) | 20 (11-54) | 0.60 |
| HIV viral load, log10c | 5.52 (5.05-5.58) | 5.36 (5.26-5.70) | 0.56 |
| Neutrophil count, ×109/Lc | 1.72 (0.93-4.24) | 1.77 (1.04-2.37) | 0.82 |
| Monocyte count, ×109/Lc | 0.41 (0.27-0.44) | 0.25 (0.18-0.52) | 0.39 |
| Lymphocyte count, ×109/Lc | 0.87 (0.63-1.36) | 0.68 (0.44-0.90) | 0.33 |
| C-reactive protein, mg/Lc  | 9.53 (3.71-27.39) | 9.64 (5.30-31.01) | 0.68 |
| Antiretroviral regime:Zidovudine/Lamivudine/ Efavirenz, n (%)Zidovudine/Lamivudine/Nevirapine, n (%)Stavudine/Lamivudine/Efavirenz, n(%) | 13 (76.5)1 (5.9)3 (17.6) | 10 (58.8)1 (5.9)6 (35.3) |  |
|  | Median Value (IQR)a**Cohort 2 (recruited****for neutrophil assays)** |  |
|  | Non-IRIS Controls  | TB-IRIS Patients  |  |
| Characteristic | (n =11 ) | (n = 18) | p valueb |
| Age, years | 39 (31-43) | 35 (29-40) | 0.33 |
| Sex (Female), No. (%) | 4 (36) | 7 (39) | >0.99 |
| Temperature (0C) | 35.7 (35.3-36.5) | 36.2 (36.0-36.5) | 0.092 |
| IRIS episode presentation, days | n/a | 14 (10-15) |  |
| CD4 count, cells/μLc | 125 (68-154) | 119 (90-188) | 0.41 |
| HIV viral load, log10c | 5.40 (4.85-5.75) | 5.80 (5.08-6.00) | 0.18 |
| Neutrophil count, ×109/Lc | 2.90 (1.90-4.20) | 2.45 (1.48-4.00) | 0.51 |
| Monocyte count, ×109/Lc | 0.24 (0.19 – 0.29) | 0.32 (0.23 – 0.36) | 0.07 |
| Lymphocyte count, ×109/Lc | 1.18 (0.83 – 1.48) | 0.72 (0.52 – 1.36) | 0.19 |
| C-reactive protein, mg/Lc  | 5.90 (2.50-26.70) | 13.55 (5.70-42.80) | 0.28 |
| Antiretroviral regime: |  |  |  |
| Tenofovir, Lamivudine/ Emtricitabine, Efavirenz, n (%) | 11 (100) | 18 (100) |  |

**Abbreviations:** IRIS, Immune Reconstitution Syndrome; CD4, Cluster of differentiation 4; TB, tuberculosis; HIV, human immunodeficiency virus; IQR, interquartile range.

a Values represent medians (IQRs) unless otherwise specified.

b P values were calculated for comparisons between groups, using the Mann Whitney U test for continuous variables and the Fisher exact test for categorical variables.

c Values presented are from time of ART initiation

**Supplementary Table 2: nCounter™ CodeSet Design for the gene expression study**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene** | **Accession** | **NSID** | **Targeted Region** | **Target Sequence** | **TmCP** | **TmRP** | **PN(CP;RP)** |
| ASC(PYCARD) | NM\_013258.3 | NM\_013258.3:714 | 714-814 | ATGCGGAAGCTCTTCAGTTTCACACCAGCCTGGAACTGGACCTGCAAGGACTTGCTCCTCCAGGCCCTAAGGGAGTCCCAGTCCTACCTGGTGGAGGACC | 85 | 86 | 315895;215895 |
| Caspase-1 | NM\_033292.2 | NM\_033292.2:575 | 575-675 | ACAGGCATGACAATGCTGCTACAAAATCTGGGGTACAGCGTAGATGTGAAAAAAAATCTCACTGCTTCGGACATGACTACAGAGCTGGAGGCATTTGCAC | 82 | 80 | 310120;210120 |
| Caspase-5 | NM\_004347.1 | NM\_004347.1:580 | 580-680 | TGCAATACAAAGTTTGATCACCTGCCTGCAAGGAATGGGGCTCACTATGACATCGTGGGGATGAAAAGGCTGCTTCAAGGCCTGGGCTACACTGTGGTTG | 80 | 81 | 301377;201377 |
| CD14 | NM\_000591.2 | NM\_000591.2:885 | 885-985 | GCCCAAGCACACTCGCCTGCCTTTTCCTGCGAACAGGTTCGCGCCTTCCCGGCCCTTACCAGCCTAGACCTGTCTGACAATCCTGGACTGGGCGAACGCG | 82 | 83 | 309575;209575 |
| CD163 | NM\_004244.4 | NM\_004244.4:1630 | 1630-1730 | CATCTGTGATTCGGACTTCTCTCTGGAAGCTGCCAGCGTTCTATGCAGGGAATTACAGTGTGGCACAGTTGTCTCTATCCTGGGGGGAGCTCACTTTGGA | 83 | 82 | 309101;209101 |
| COX 1(PTGS1) | NM\_000962.2 | NM\_000962.2:700 | 700-800 | ACCCCCAAGGCACCAACCTCATGTTTGCCTTCTTTGCACAACACTTCACCCACCAGTTCTTCAAAACTTCTGGCAAGATGGGTCCTGGCTTCACCAAGGC | 81 | 79 | 306892;206892 |
| COX 2 (PTGS2) | NM\_000963.1 | NM\_000963.1:495 | 495-595 | GCTACAAAAGCTGGGAAGCCTTCTCTAACCTCTCCTATTATACTAGAGCCCTTCCTCCTGTGCCTGATGATTGCCCGACTCCCTTGGGTGTCAAAGGTAA | 79 | 81 | 300048;200048 |
| IFNg | NM\_000619.2 | NM\_000619.2:970 | 970-1070 | ATACTATCCAGTTACTGCCGGTTTGAAAATATGCCTGCAATCTGAGCCAGTGCTTTAATGGCATGTCAGACAGAACTTGAATGTGTCAGGTGACCCTGAT | 76 | 79 | 301672;201672 |
| IL-10 | NM\_000572.2 | NM\_000572.2:230 | 230-330 | AAGGATCAGCTGGACAACTTGTTGTTAAAGGAGTCCTTGCTGGAGGACTTTAAGGGTTACCTGGGTTGCCAAGCCTTGTCTGAGATGATCCAGTTTTACC | 79 | 79 | 301231;201231 |
| IL-18 | NM\_001562.2 | NM\_001562.2:48 | 48-148 | GACAGTCAGCAAGGAATTGTCTCCCAGTGCATTTTGCCCTCCTGGCTGCCAACTCTGGCTGCTAAAGCGGCTGCCACCTGCTGCAGTCTACACAGCTTCG | 84 | 85 | 310105;210105 |
| IL-1b | NM\_000576.2 | NM\_000576.2:840 | 840-940 | GGGACCAAAGGCGGCCAGGATATAACTGACTTCACCATGCAATTTGTGTCTTCCTAAAGAGAGCTGTACCCAGAGAGTCCTGTGCTGAATGTGGACTCAA | 81 | 82 | 300980;200980 |
| IL-6 | NM\_000600.1 | NM\_000600.1:220 | 220-320 | TGACAAACAAATTCGGTACATCCTCGACGGCATCTCAGCCCTGAGAAAGGAGACATGTAACAAGAGTAACATGTGTGAAAGCAGCAAAGAGGCACTGGCA | 79 | 80 | 300038;200038 |
| IL-7 | NM\_000880.2 | NM\_000880.2:38 | 38-138 | AATAACCCAGCTTGCGTCCTGCACACTTGTGGCTTCCGTGCACACATTAACAACTCATGGTTCTAGCTCCCAGTCGCCAAGCGTTGCCAAGGCGTTGAGA | 83 | 85 | 312873;212873 |
| IL-7R (CD127) | NM\_002185.2 | NM\_002185.2:1610 | 1610-1710 | TTGCTTTGACCACTCTTCCTGAGTTCAGTGGCACTCAACATGAGTCAAGAGCATCCTGCTTCTACCATGTGGATTTGGTCACAAGGTTTAAGGTGACCCA | 78 | 79 | 302928;202928 |
| IL-8 (CXCL8) | NM\_000584.2 | NM\_000584.2:25 | 25-125 | ACAGCAGAGCACACAAGCTTCTAGGACAAGAGCCAGGAAGAAACCACCGGAAGGAACCATCTCACTGTGTGTAAACATGACTTCCAAGCTGGCCGTGGCT | 82 | 81 | 300981;200981 |
| IL-10Ra | NM\_001558.2 | NM\_001558.2:150 | 150-250 | TGCCCAGCCCTCCGTCTGTGTGGTTTGAAGCAGAATTTTTCCACCACATCCTCCACTGGACACCCATCCCAAATCAGTCTGAAAGTACCTGCTATGAAGT | 79 | 80 | 310129;210129 |
| IL-10Rb | NM\_000628.3 | NM\_000628.3:1760 | 1760-1860 | TTCTACCAGATTATGGATGGACTGATCTGAAAATCGACCTCAACTCAAGGGTGGTCAGCTCAATGCTACACAGAGCACGGACTTTTGGATTCTTTGCAGT | 82 | 81 | 316760;216760 |
| IL-12A | NM\_000882.2 | NM\_000882.2:775 | 775-875 | CTTTCTAGATCAAAACATGCTGGCAGTTATTGATGAGCTGATGCAGGCCCTGAATTTCAACAGTGAGACTGTGCCACAAAAATCCTCCCTTGAAGAACCG | 82 | 82 | 311545;211545 |
| IL-12RB1 | NM\_005535.1 | NM\_005535.1:1292 | 1292-1392 | AGGAAAAGTGTTACTACATTACCATCTTTGCCTCTGCGCACCCCGAGAAGCTCACCTTGTGGTCTACGGTCCTGTCCACCTACCACTTTGGGGGCAATGC | 83 | 86 | 315839;215839 |
| IL-12RB2 | NM\_001559.2 | NM\_001559.2:1315 | 1315-1415 | CCTCCGTGGGACATTAGAATCAAATTTCAAAAGGCTTCTGTGAGCAGATGTACCCTTTATTGGAGAGATGAGGGACTGGTACTGCTTAATCGACTCAGAT | 79 | 83 | 316775;216775 |
| IP-10 (CXCL-10) | NM\_001565.1 | NM\_001565.1:40 | 40-140 | GCAGAGGAACCTCCAGTCTCAGCACCATGAATCAAACTGCGATTCTGATTTGCTGCCTTATCTTTCTGACTCTAAGTGGCATTCAAGGAGTACCTCTCTC | 80 | 78 | 301917;201917 |
| IPAF(NLRC4) | NM\_021209.3 | NM\_021209.3:840 | 840-940 | GCTCTGACCAAGTTCAAATTCGTCTTCTTCCTCCGTCTCAGCAGGGCCCAGGGTGGACTTTTTGAAACCCTCTGTGATCAACTCCTGGATATACCTGGCA | 78 | 80 | 300813;200813 |
| MCP-1 (CCL2) | NM\_002982.3 | NM\_002982.3:0 | 0-100 | GAGGAACCGAGAGGCTGAGACTAACCCAGAAACATCCAATTCTCAAACTGAAGCTCGCACTCTCGCCTCCAGCATGAAAGTCTCTGCCGCCCTTCTGTGC | 80 | 82 | 301314;201314 |
| NALP-1(NLRP1) | NM\_033004.2 | NM\_033004.2:2135 | 2135-2235 | CCTGATGCAGCAGATGAAGCGGAAGGAAAAACTCACACTGACTTCCAAGACCACCACAACCCTCTGTCTACATTACCTTGCCCAGGCTCTCCAAGCTCAG | 80 | 82 | 301508;201508 |
| NALP-3(NLRP3) | NM\_001079821.2 | NM\_001079821.2:415 | 415-515 | AGTGGGGTTCAGATAATGCACGTGTTTCGAATCCCACTGTGATATGCCAGGAAGACAGCATTGAAGAGGAGTGGATGGGTTTACTGGAGTACCTTTCGAG | 79 | 82 | 307148;207148 |
| PGDH(HPGD) | NM\_001145816.1 | NM\_001145816.1:570 | 570-670 | AGGTGAAGGCGGCATCATTATCAATATGTCATCTTTAGCAGGACTCATGCCCGTTGCACAGCAGCCGGTTTATTGTGCTTCAAAGCATGGCATAGTTGGA | 80 | 80 | 347104;247104 |
| Pypaf-7 (NLRP12) | NM\_033297.1 | NM\_033297.1:1030 | 1030-1130 | TTCAAGCAGACCAGAGAGGACCGTTCTGCTGGACGCCTACAGTGAACATCTGGCAGCGGCCCTGTGCACCAATCCAAACCTGATAGAGCTGTCTCTGTAC | 83 | 82 | 301511;201511 |
| S100A9 | NM\_002965.2 | NM\_002965.2:75 | 75-175 | AACATAGAGACCATCATCAACACCTTCCACCAATACTCTGTGAAGCTGGGGCACCCAGACACCCTGAACCAGGGGGAATTCAAAGAGCTGGTGCGAAAAG | 81 | 82 | 300798;200798 |
| SLAM (SLAMF1) | NM\_003037.2 | NM\_003037.2:580 | 580-680 | GTGTCTCTTGATCCATCCGAAGCAGGCCCTCCACGTTATCTAGGAGATCGCTACAAGTTTTATCTGGAGAATCTCACCCTGGGGATACGGGAAAGCAGGA | 82 | 81 | 308992;208992 |
| SOCS1 | NM\_003745.1 | NM\_003745.1:1025 | 1025-1125 | TTAACTGTATCTGGAGCCAGGACCTGAACTCGCACCTCCTACCTCTTCATGTTTACATATACCCAGTATCTTTGCACAAACCAGGGGTTGGGGGAGGGTC | 83 | 82 | 301664;201664 |
| SOCS3 | NM\_003955.3 | NM\_003955.3:1870 | 1870-1970 | GGAGGATGGAGGAGACGGGACATCTTTCACCTCAGGCTCCTGGTAGAGAAGACAGGGGATTCTACTCTGTGCCTCCTGACTATGTCTGGCTAAGAGATTC | 82 | 82 | 301356;201356 |
| TLR1 | NM\_003263.3 | NM\_003263.3:545 | 545-645 | TCAACCAGGAATTGGAATACTTGGATTTGTCCCACAACAAGTTGGTGAAGATTTCTTGCCACCCTACTGTGAACCTCAAGCACTTGGACCTGTCATTTAA | 80 | 79 | 315332;215332 |
| TLR2 | NM\_003264.3 | NM\_003264.3:180 | 180-280 | CTGCTTTCAACTGGTAGTTGTGGGTTGAAGCACTGGACAATGCCACATACTTTGTGGATGGTGTGGGTCTTGGGGGTCATCATCAGCCTCTCCAAGGAAG | 80 | 83 | 300995;200995 |
| TLR4 | NM\_138554.2 | NM\_138554.2:2570 | 2570-2670 | ACTCAGAAAAGCCCTGCTGGATGGTAAATCATGGAATCCAGAAGGAACAGTGGGTACAGGATGCAATTGGCAGGAAGCAACATCTATCTGAAGAGGAAAA | 79 | 79 | 306332;206332 |
| TNFa | NM\_000594.2 | NM\_000594.2:1010 | 1010-1110 | AGCAACAAGACCACCACTTCGAAACCTGGGATTCAGGAATGTGTGGCCTGCACAGTGAAGTGCTGGCAACCACTAAGAATTCAAACTGGGGCCTCCAGAA | 83 | 81 | 301235;201235 |
| TRAC  | TRAC.1 | TRAC.1:126 | 126-226 | ATATCACAGACAAAACTGTGCTAGACATGAGGTCTATGGACTTCAAGAGCAACAGTGCTGTGGCCTGGAGCAACAAATCTGACTTTGCATGTGCAAACGC | 85 | 86 | 349448;249448 |
| TRAV1-1 | TRAV1\_1.1 | TRAV1\_1.1:243 | 243-343 | AGTCGCTCTGATAGTTATGGTTACCTCCTTCTACAGGAGCTCCAGATGAAAGACTCTGCCTCTTACTTCTGCGCTGTGAGAGACACAGTGACTATGAGGC | 82 | 85 | 349416;249416 |
| TRAV1-2 | TRAV1\_2.1 | TRAV1\_2.1:187 | 187-287 | TGTCTTACAATGTTCTGGATGGTTTGGAGGAGAAAGGTCGTTTTTCTTCATTCCTTAGTCGGTCTAAAGGGTACAGTTACCTCCTTTTGAAGGAGCTCCA | 73 | 79 | 349409;249409 |
| TRAV2 | TRAV2.1 | TRAV2.1:67 | 67-167 | CAGAAAGCAAGGACCAAGTGTTTCAGCCTTCCACAGTGGCATCTTCAGAGGGAGCTGTGGTGGAAATCTTCTGTAATCACTCTGTGTCCAATGCTTACAA | 84 | 81 | 349453;249453 |
| TRAV3 | TRAV3.1 | TRAV3.1:163 | 163-263 | ATGTTCAATACCCCAACCGAGGCCTCCAGTTCCTTCTGAAATACATCACAGGGGATAACCTGGTTAAAGGCAGCTATGGCTTTGAAGCTGAATTTAACAA | 81 | 82 | 349426;249426 |
| TRAV4 | TRAV4.1 | TRAV4.1:159 | 159-259 | CAACAGTTTCCCAGCCAAGGACCACGATTTATTATTCAAGGATACAAGACAAAAGTTACAAACGAAGTGGCCTCCCTGTTTATCCCTGCCGACAGAAAGT | 78 | 83 | 349463;249463 |
| TRAV5 | TRAV5.1 | TRAV5.1:169 | 169-269 | AGCAAGAACCTGGAGCAGGTCTCCAGTTGCTGACGTATATTTTTTCAAATATGGACATGAAACAAGACCAAAGACTCACTGTTCTATTGAATAAAAAGGA | 78 | 81 | 349442;249442 |
| TRAV6 | TRAV6.1 | TRAV6.1:128 | 128-228 | CAACTATACAAACTATTCCCCAGCATACTTACAGTGGTACCGACAAGATCCAGGAAGAGGCCCTGTTTTCTTGCTACTCATACGTGAAAATGAGAAAGAA | 81 | 81 | 349443;249443 |
| TRAV7 | TRAV7.1 | TRAV7.1:136 | 136-236 | ACTCTGTCAGTCGTTTTAACAATTTGCAGTGGTACAGGCAAAATACAGGGATGGGTCCCAAACACCTATTATCCATGTATTCAGCTGGATATGAGAAGCA | 78 | 82 | 349464;249464 |
| TRAV8 | TRAV8\_2.1 | TRAV8\_2.1:207 | 207-307 | ACATCAGCGGCCACCCTGGTTAAAGGCATCAACGGTTTTGAGGCTGAATTTAAGAAGAGTGAAACCTCCTTCCACCTGACGAAACCCTCAGCCCATATGA | 84 | 85 | 349404;249404 |
| TRAV8-1 | TRAV8\_1.1 | TRAV8\_1.1:109 | 109-209 | CACTGGAGTTGGGATGCAACTATTCCTATGGTGGAACTGTTAATCTCTTCTGGTATGTCCAGTACCCTGGTCAACACCTTCAGCTTCTCCTCAAGTACTT | 80 | 82 | 349465;249465 |
| TRAV8-3 | TRAV8\_3.1 | TRAV8\_3.1:49 | 49-149 | CTGCCAGAGCCCAGTCAGTGACCCAGCCTGACATCCACATCACTGTCTCTGAAGGAGCCTCACTGGAGTTGAGATGTAACTATTCCTATGGGGCAACACC | 85 | 84 | 349419;249419 |
| TRAV8-6 | TRAV8\_6.1 | TRAV8\_6.1:207 | 207-307 | TTATCAGGATCCACCCTGGTTAAAGGCATCAACGGTTTTGAGGCTGAATTTAACAAGAGTCAAACTTCCTTCCACTTGAGGAAACCCTCAGTCCATATAA | 79 | 80 | 349412;249412 |
| TRAV9-1 | TRAV9\_1.1 | TRAV9\_1.1:41 | 41-141 | GTTTGGGGGAATCAATGGAGATTCAGTGGTCCAGACAGAAGGCCAAGTGCTCCCCTCTGAAGGGGATTCCCTGATTGTGAACTGCTCCTATGAAACCACA | 85 | 84 | 349431;249431 |
| TRAV9-2 | TRAV9\_2.1 | TRAV9\_2.1:4 | 4-104 | ACTATTCTCCAGGCTTAGTATCTCTGATACTCTTACTGCTTGGAAGAACCCGTGGAAATTCAGTGACCCAGATGGAAGGGCCAGTGACTCTCTCAGAAGA | 80 | 86 | 349466;249466 |
| TRAV10 | TRAV10.1 | TRAV10.1:164 | 164-264 | GTGGTATAAGCAAGATACTGGGAGAGGTCCTGTTTCCCTGACAATCATGACTTTCAGTGAGAACACAAAGTCGAACGGAAGATATACAGCAACTCTGGAT | 84 | 82 | 349449;249449 |
| TRAV12-1 | TRAV12\_1.1 | TRAV12\_1.1:140 | 140-240 | CAACAGTGCTTCTCAGTCTTTCTTCTGGTACAGACAGGATTGCAGGAAAGAACCTAAGTTGCTGATGTCCGTATACTCCAGTGGTAATGAAGATGGAAGG | 80 | 83 | 349410;249410 |
| TRAV12-2 | TRAV12\_2.1 | TRAV12\_2.1:128 | 128-228 | CAACTGCACTTACAGTGACCGAGGTTCCCAGTCCTTCTTCTGGTACAGACAATATTCTGGGAAAAGCCCTGAGTTGATAATGTTCATATACTCCAATGGT | 84 | 77 | 349415;249415 |
| TRAV12-3 | TRAV12\_3.1 | TRAV12\_3.1:100 | 100-200 | GTGTTCCAGAGGGAGCCATTGTTTCTCTCAACTGCACTTACAGCAACAGTGCTTTTCAATACTTCATGTGGTACAGACAGTATTCCAGAAAAGGCCCTGA | 82 | 79 | 349411;249411 |
| TRAV13-1 | TRAV13\_1.1 | TRAV13\_1.1:233 | 233-333 | CCAACGAATTGCTGTTACATTGAACAAGACAGCCAAACATTTCTCCCTGCACATCACAGAGACCCAACCTGAAGACTCGGCTGTCTACTTCTGTGCAGCA | 80 | 86 | 349408;249408 |
| TRAV13-2 | TRAV13\_2.1 | TRAV13\_2.1:229 | 229-329 | GGCAAGGCCAAAGAGTCACCGTTTTATTGAATAAGACAGTGAAACATCTCTCTCTGCAAATTGCAGCTACTCAACCTGGAGACTCAGCTGTCTACTTTTG | 80 | 82 | 349450;249450 |
| TRAV14 | TRAV14.1 | TRAV14.1:232 | 232-332 | ATGCAACAGAAGGTCGCTACTCATTGAATTTCCAGAAGGCAAGAAAATCCGCCAACCTTGTCATCTCCGCTTCACAACTGGGGGACTCAGCAATGTATTT | 82 | 83 | 349451;249451 |
| TRAV16 | TRAV16.1 | TRAV16.1:223 | 223-323 | TCAAAGGCTTCACTGCTGACCTTAACAAAGGCGAGACATCTTTCCACCTGAAGAAACCATTTGCTCAAGAGGAAGACTCAGCCATGTATTACTGTGCTCT | 84 | 83 | 349452;249452 |
| TRAV17 | TRAV17.1 | TRAV17.1:181 | 181-281 | GAGGCCTTGTCCACCTAATTTTAATACGTTCAAATGAAAGAGAGAAACACAGTGGAAGATTAAGAGTCACGCTTGACACTTCCAAGAAAAGCAGTTCCTT | 78 | 80 | 349437;249437 |
| TRAV18 | TRAV18.1 | TRAV18.1:198 | 198-298 | CTGAAAAGTTCAGAAAACCAGGAGACGGACAGCAGAGGTTTTCAGGCCAGTCCTATCAAGAGTGACAGTTCCTTCCACCTGGAGAAGCCCTCGGTGCAGC | 85 | 85 | 349425;249425 |
| TRAV19 | TRAV19.1 | TRAV19.1:113 | 113-213 | TGTGACCTTGGACTGTGTGTATGAAACCCGTGATACTACTTATTACTTATTCTGGTACAAGCAACCACCAAGTGGAGAATTGGTTTTCCTTATTCGTCGG | 77 | 78 | 349438;249438 |
| TRAV20 | TRAV20.1 | TRAV20.1:136 | 136-236 | ACACAGTCAGCGGTTTAAGAGGGCTGTTCTGGTATAGGCAAGATCCTGGGAAAGGCCCTGAATTCCTCTTCACCCTGTATTCAGCTGGGGAAGAAAAGGA | 85 | 85 | 349417;249417 |
| TRAV21 | TRAV21.1 | TRAV21.1:177 | 177-277 | GGGAAAGGTCTCACATCTCTGTTGCTTATTCAGTCAAGTCAGAGAGAGCAAACAAGTGGAAGACTTAATGCCTCGCTGGATAAATCATCAGGACGTAGTA | 82 | 83 | 349454;249454 |
| TRAV22 | TRAV22.1 | TRAV22.1:113 | 113-213 | TTCCACGCTGCGGTGCAATTTTTCTGACTCTGTGAACAATTTGCAGTGGTTTCATCAAAACCCTTGGGGACAGCTCATCAACCTGTTTTACATTCCCTCA | 77 | 78 | 349455;249455 |
| TRAV23 | TRAV23\_DV6.1 | TRAV23\_DV6.1:70 | 70-170 | AGGAGAAAAGTGACCAGCAGCAGGTGAAACAAAGTCCTCAATCTTTGATAGTCCAGAAAGGAGGGATTTCAATTATAAACTGTGCTTATGAGAACACTGC | 84 | 81 | 349439;249439 |
| TRAV24 | TRAV24.1 | TRAV24.1:84 | 84-184 | AGTCCTCAGTCACTGCATGTTCAGGAGGGAGACAGCACCAATTTCACCTGCAGCTTCCCTTCCAGCAATTTTTATGCCTTACACTGGTACAGATGGGAAA | 85 | 78 | 349456;249456 |
| TRAV25 | TRAV25.1 | TRAV25.1:99 | 99-199 | GGAGAGGACTTCACCACGTACTGCAATTCCTCAACTACTTTAAGCAATATACAGTGGTATAAGCAAAGGCCTGGTGGACATCCCGTTTTTTTGATACAGT | 81 | 79 | 349457;249457 |
| TRAV26\_1 | TRAV26\_1.1 | TRAV26\_1.1:92 | 92-192 | AGGAAGAGCTGCAAACCTGCCTTGTAATCACTCTACCATCAGTGGAAATGAGTATGTGTATTGGTATCGACAGATTCACTCCCAGGGGCCACAGTATATC | 84 | 81 | 349458;249458 |
| TRAV26\_2 | TRAV26\_2.1 | TRAV26\_2.1:25 | 25-125 | TACTCCTATCTTTGGGTATTATGGGTGATGCTAAGACCACACAGCCAAATTCAATGGAGAGTAACGAAGAAGAGCCTGTTCACTTGCCTTGTAACCACTC | 82 | 84 | 349459;249459 |
| TRAV27 | TRAV27.1 | TRAV27.1:69 | 69-169 | CAGAGCCCTCAGTTTCTAAGCATCCAAGAGGGAGAAAATCTCACTGTGTACTGCAACTCCTCAAGTGTTTTTTCCAGCTTACAATGGTACAGACAGGAGC | 83 | 80 | 349460;249460 |
| TRAV29 | TRAV29\_DV5.1 | TRAV29\_DV5.1:0 | 0-100 | ATGGCCATGCTCCTGGGGGCATCAGTGCTGATTCTGTGGCTTCAGCCAGACTGGGTAAACAGTCAACAGAAGAATGATGACCAGCAAGTTAAGCAAAATT | 85 | 82 | 349418;249418 |
| TRAV30 | TRAV30.1 | TRAV30.1:236 | 236-336 | AAAAATATCTGCTTCATTTAATGAAAAAAAGCAGCAAAGCTCCCTGTACCTTACGGCCTCCCAGCTCAGTTACTCAGGAACCTACTTCTGCGGCACAGAG | 78 | 86 | 349440;249440 |
| TRAV34 | TRAV34.1 | TRAV34.1:169 | 169-269 | AAAAGTATGGTGAAGGTCTTATCTTCTTGATGATGCTACAGAAAGGTGGGGAAGAGAAAAGTCATGAAAAGATAACTGCCAAGTTGGATGAGAAAAAGCA | 80 | 84 | 349427;249427 |
| TRAV35 | TRAV35.1 | TRAV35.1:216 | 216-316 | TTGACCTCAAATGGAAGACTGACTGCTCAGTTTGGTATAACCAGAAAGGACAGCTTCCTGAATATCTCAGCATCCATACCTAGTGATGTAGGCATCTACT | 84 | 81 | 349461;249461 |
| TRAV36 | TRAV36\_DV7.1 | TRAV36\_DV7.1:172 | 172-272 | AGCAGGAAAAGAAAGCTCCCACATTTCTATTTATGCTAACTTCAAGTGGAATTGAAAAGAAGTCAGGAAGACTAAGTAGCATATTAGATAAGAAAGAACT | 78 | 79 | 349428;249428 |
| TRAV38 | TRAV38\_1.1 | TRAV38\_1.1:218 | 218-318 | TTATAAGCAACAGAATGCAACGGAGAATCGTTTCTCTGTGAACTTCCAGAAAGCAGCCAAATCCTTCAGTCTCAAGATCTCAGACTCACAGCTGGGGGAC | 78 | 84 | 349429;249429 |
| TRAV39 | TRAV39.1 | TRAV39.1:62 | 62-162 | AGTGGAACAAAACCCTCTGTTCCTGAGCATGCAGGAGGGAAAAAACTATACCATCTACTGCAATTATTCAACCACTTCAGACAGACTGTATTGGTACAGG | 85 | 79 | 349462;249462 |
| TRAV40 | TRAV40.1 | TRAV40.1:149 | 149-249 | TTTCTGGTATGTGGAATACCCCAGCAAACCTCTGCAGCTTCTTCAGAGAGAGACAATGGAAAACAGCAAAAACTTCGGAGGCGGAAATATTAAAGACAAA | 83 | 83 | 349441;249441 |
| TRAV41 | TRAV41.1 | TRAV41.1:236 | 236-336 | AAGATTAATTGCCACAATAAACATACAGGAAAAGCACAGCTCCCTGCACATCACAGCCTCCCATCCCAGAGACTCTGCCGTCTACATCTGTGCTGTCAGA | 84 | 86 | 349430;249430 |
| TRBC1 | TRBC1.1 | TRBC1.1:29 | 29-129 | GTCGCTGTGTTTGAGCCATCAGAAGCAGAGATCTCCCACACCCAAAAGGCCACACTGGTGTGCCTGGCCACAGGCTTCTTCCCCGACCACGTGGAGCTGA | 86 | 86 | 349413;249413 |
| TRBV2 | TRBV2.1 | TRBV2.1:221 | 221-321 | AGAGAAGTCTGAAATATTCGATGATCAATTCTCAGTTGAAAGGCCTGATGGATCAAATTTCACTCTGAAGATCCGGTCCACAAAGCTGGAGGACTCAGCC | 77 | 85 | 349446;249446 |
| TRBV3-1 | TRBV3\_1.1 | TRBV3\_1.1:228 | 228-328 | GAAACAGTTCCAAATCGCTTCTCACCTAAATCTCCAGACAAAGCTCACTTAAATCTTCACATCAATTCCCTGGAGCTTGGTGACTCTGCTGTGTATTTCT | 79 | 77 | 349474;249474 |
| TRBV4 | TRBV4\_2.1 | TRBV4\_2.1:244 | 244-344 | GCTTCTCACCTGAATGCCCCAACAGCTCTCACTTATTCCTTCACCTACACACCCTGCAGCCAGAAGACTCGGCCCTGTATCTCTGTGCCAGCAGCCAAGA | 83 | 87 | 349402;249402 |
| TRBV5 | TRBV5\_8.1 | TRBV5\_8.1:263 | 263-363 | CCCTAATTATAGCTCTGAGCTGAATGTGAACGCCTTGGAGCTGGAGGACTCGGCCCTGTATCTCTGTGCCAGCAGCTTGG | 80 | 87 | 349401;249401 |
| TRBV5-1 | TRBV5\_1.1 | TRBV5\_1.1:172 | 172-272 | CAGGACAGGGCCTTCAGTTCCTCTTTGAATACTTCAGTGAGACACAGAGAAACAAAGGAAACTTCCCTGGTCGATTCTCAGGGCGCCAGTTCTCTAACTC | 83 | 84 | 349475;249475 |
| TRBV6 | TRBV6\_1.1 | TRBV6\_1.1:55 | 55-155 | TGAATGCTGGTGTCACTCAGACCCCAAAATTCCAGGTCCTGAAGACAGGACAGAGCATGACACTGCAGTGTGCCCAGGATATGAACCATAACTCCATGTA | 79 | 88 | 349400;249400 |
| TRBV6-4 | TRBV6\_4.1 | TRBV6\_4.1:102 | 102-202 | GGACGGAGCATGACACTGAGATGTACCCAGGATATGAGACATAATGCCATGTACTGGTATAGACAAGATCTAGGACTGGGGCTAAGGCTCATCCATTATT | 86 | 84 | 349476;249476 |
| TRBV7 | TRBV7\_2.1 | TRBV7\_2.1:77 | 77-177 | CCCCAGTAACAAGGTCACAGAGAAGGGAAAGGATGTAGAGCTCAGGTGTGATCCAATTTCAGGTCATACTGCCCTTTACTGGTACCGACAGAGCCTGGGG | 85 | 85 | 349424;249424 |
| TRBV7-6 | TRBV7\_6.1 | TRBV7\_6.1:44 | 44-144 | GACAGATCACACAGGTGCTGGAGTCTCCCAGTCTCCCAGGTACAAAGTCACAAAGAGGGGACAGGATGTAGCTCTCAGGTGTGATCCAATTTCGGGTCAT | 86 | 85 | 349403;249403 |
| TRBV7-9 | TRBV7\_9.1 | TRBV7\_9.1:144 | 144-244 | AACCGCCTTTATTGGTACCGACAGACCCTGGGGCAGGGCCCAGAGTTTCTGACTTACTTCCAGAATGAAGCTCAACTAGAAAAATCAAGGCTGCTCAGTG | 85 | 83 | 349414;249414 |
| TRBV9 | TRBV9.1 | TRBV9.1:180 | 180-280 | GGCCTCCAGTTCCTCATTCAGTATTATAATGGAGAAGAGAGAGCAAAAGGAAACATTCTTGAACGATTCTCCGCACAACAGTTCCCTGACTTGCACTCTG | 82 | 79 | 349435;249435 |
| TRBV10-2 | TRBV10\_2.1 | TRBV10\_2.1:69 | 69-169 | ACCCAGAGCCCAAGATACAAGATCACAGAGACAGGAAGGCAGGTGACCTTGATGTGTCACCAGACTTGGAGCCACAGCTATATGTTCTGGTATCGACAAG | 86 | 83 | 349420;249420 |
| TRBV10-3 | TRBV10\_3.1 | TRBV10\_3.1:179 | 179-279 | TGGGCTGAGGCTGATCCATTACTCATATGGTGTTAAAGATACTGACAAAGGAGAAGTCTCAGATGGCTATAGTGTCTCTAGATCAAAGACAGAGGATTTC | 83 | 81 | 349421;249421 |
| TRBV11 | TRBV11\_1.1 | TRBV11\_1.1:225 | 225-325 | GATTCACAGTTGCCTAAGGATCGATTTTCTGCAGAGAGGCTCAAAGGAGTAGACTCCACTCTCAAGATCCAGCCTGCAGAGCTTGGGGACTCGGCCATGT | 81 | 84 | 349423;249423 |
| TRBV12 | TRBV12\_3.1 | TRBV12\_3.1:162 | 162-262 | AGACAGACCATGATGCGGGGACTGGAGTTGCTCATTTACTTTAACAACAACGTTCCGATAGATGATTCAGGGATGCCCGAGGATCGATTCTCAGCTAAGA | 83 | 81 | 349422;249422 |
| TRBV12-5 | TRBV12\_5.1 | TRBV12\_5.1:116 | 116-216 | AATGAGATGTCAGCCAATTTTAGGCCACAATACTGTTTTCTGGTACAGACAGACCATGATGCAAGGACTGGAGTTGCTGGCTTACTTCCGCAACCGGGCT | 78 | 86 | 349432;249432 |
| TRBV13 | TRBV13.1 | TRBV13.1:91 | 91-191 | CTGGAGTCATCCAGTCCCCAAGACATCTGATCAAAGAAAAGAGGGAAACAGCCACTCTGAAATGCTATCCTATCCCTAGACACGACACTGTCTACTGGTA | 85 | 85 | 349444;249444 |
| TRBV14 | TRBV14.1 | TRBV14.1:244 | 244-344 | ATCGATTCTTAGCTGAAAGGACTGGAGGGACGTATTCTACTCTGAAGGTGCAGCCTGCAGAACTGGAGGATTCTGGAGTTTATTTCTGTGCCAGCAGCCA | 83 | 85 | 349467;249467 |
| TRBV15 | TRBV15.1 | TRBV15.1:31 | 31-131 | TTTGTCTCCTTGGAACAGGTCATGGGGATGCCATGGTCATCCAGAACCCAAGATACCAGGTTACCCAGTTTGGAAAGCCAGTGACCCTGAGTTGTTCTCA | 85 | 82 | 349468;249468 |
| TRBV18 | TRBV18.1 | TRBV18.1:150 | 150-250 | GTTTACTGGTATCGGCAGCTCCCAGAGGAAGGTCTGAAATTCATGGTTTATCTCCAGAAAGAAAATATCATAGATGAGTCAGGAATGCCAAAGGAACGAT | 80 | 83 | 349445;249445 |
| TRBV19 | TRBV19.1 | TRBV19.1:166 | 166-266 | AGGACCCAGGGCAAGGGCTGAGATTGATCTACTACTCACACATAGTAAATGACTTTCAGAAAGGAGATATAGCTGAAGGGTACAGCGTCTCTCGGGAGAA | 85 | 85 | 349469;249469 |
| TRBV20 | TRBV20\_1.1 | TRBV20\_1.1:41 | 41-141 | TGGTGCTGTCGTCTCTCAACATCCGAGCAGGGTTATCTGTAAGAGTGGAACCTCTGTGAAGATCGAGTGCCGTTCCCTGGACTTTCAGGCCACAACTATG | 84 | 84 | 349470;249470 |
| TRBV24 | TRBV24\_1.1 | TRBV24\_1.1:24 | 24-124 | GGGGCCTTTTATCTCCTGGGAACAGGGTCCATGGATGCTGATGTTACCCAGACCCCAAGGAATAGGATCACAAAGACAGGAAAGAGGATTATGCTGGAAT | 85 | 86 | 349433;249433 |
| TRBV25 | TRBV25\_1.1 | TRBV25\_1.1:161 | 161-261 | TCAACAAGATCCAGGAATGGAACTACACCTCATCCACTATTCCTATGGAGTTAATTCCACAGAGAAGGGAGATCTTTCCTCTGAGTCAACAGTCTCCAGA | 85 | 81 | 349471;249471 |
| TRBV27 | TRBV27.1 | TRBV27.1:163 | 163-263 | GACAAGACCCAGGGCTGGGCTTAAGGCAGATCTACTATTCAATGAATGTTGAGGCGACTGATAAGGGAGATGTTCCTGAAGGGTACAAAGTCTCTCGAAA | 86 | 86 | 349472;249472 |
| TRBV28 | TRBV28.1 | TRBV28.1:45 | 45-145 | GTAGGCCTCGTAGATGTGAAAGTAACCCAGAGCTCGAGATATCTAGTCAAAAGGACGGGAGAGAAAGTTTTTCTGGAATGTGTCCAGGATATGGACCATG | 83 | 83 | 349434;249434 |
| TRBV29 | TRBV29\_1.1 | TRBV29\_1.1:52 | 52-152 | TCATCTCTCAAAAGCCAAGCAGGGATATCTGTCAACGTGGAACCTCCCTGACGATCCAGTGTCAAGTCGATAGCCAAGTCACCATGATGTTCTGGTACCG | 86 | 82 | 349473;249473 |
| TRBV30 | TRBV30.1 | TRBV30.1:192 | 192-292 | TTCTACTCCGTTGGTATTGGCCAGATCAGCTCTGAGGTGCCCCAGAATCTCTCAGCCTCCAGACCCCAGGACCGGCAGTTCATCCTGAGTTCTAAGAAGC | 84 | 86 | 349447;249447 |
| TRDC | TRDC.1 | TRDC.1:773 | 773-873 | AGGCTCTGCTCAACTGAGCACTAGATTTGCTACAAACCAGCATCATCTTCTTCCTCCTGTCCTCACGGCTTGTCCCACCCTCTATGTTCACTTCAGGAGC | 84 | 84 | 349477;249477 |
| TRDV1 | TRDV1.1 | TRDV1.1:225 | 225-325 | CAGAATGCAAAAAGTGGTCGCTATTCTGTCAACTTCAAGAAAGCAGCGAAATCCGTCGCCTTAACCATTTCAGCCTTACAGCTAGAAGATTCAGCAAAGT | 80 | 79 | 349478;249478 |
| TRDV2 | TRDV2.1 | TRDV2.1:213 | 213-313 | AAGGACATCTATGGCCCTGGTTTCAAAGACAATTTCCAAGGTGACATTGATATTGCAAAGAACCTGGCTGTACTTAAGATACTTGCACCATCAGAGAGAG | 80 | 83 | 349479;249479 |
| TRDV3 | TRDV3.1 | TRDV3.1:203 | 203-303 | GGATAACAGCAGATCAGAAGGTGCAGATTTTACTCAAGGACGGTTTTCTGTGAAACACATTCTGACCCAGAAAGCCTTTCACTTGGTGATCTCTCCAGTA | 79 | 81 | 349480;249480 |
| TRGC1 | TRGC1.1 | TRGC1.1:182 | 182-282 | ACCATGAAGACTAACGACACATACATGAAATTTAGCTGGTTAACGGTGCCAGAAAAGTCACTGGACAAAGAACACAGATGTATCGTCAGACATGAGAATA | 83 | 83 | 349407;249407 |
| TRGV2 | TRGV2.1 | TRGV2.1:59 | 59-159 | CAACTTGGAAGGGAGAACGAAGTCAGTCATCAGGCAGACTGGGTCATCTGCTGAAATCACTTGTGATCTTGCTGAAGGAAGTAACGGCTACATCCACTGG | 85 | 83 | 349405;249405 |
| TRGV3 | TRGV3.1 | TRGV3.1:210 | 210-310 | TCCACCGCAAGGGATGTGTTGGAATCAGGACTCAGTCCAGGAAAGTATTATACTCATACACCCAGGAGGTGGAGCTGGATATTGAGACTGCAAAATCTAA | 85 | 85 | 349406;249406 |
| TRGV8 | TRGV8.1 | TRGV8.1:232 | 232-332 | AATCAGGAATCAGTCGAGAAAAGTATCATACTTATGCAAGCACAGGGAAGAGCCTTAAATTTATACTGGAAAATCTAATTGAACGTGACTCTGGGGTCTA | 82 | 77 | 349436;249436 |
| TRGV9 | TRGV9.1 | TRGV9.1:66 | 66-166 | CACCTAGAGCAACCTCAAATTTCCAGTACTAAAACGCTGTCAAAAACAGCCCGCCTGGAATGTGTGGTGTCTGGAATAACAATTTCTGCAACATCTGTAT | 82 | 80 | 349481;249481 |
| CD3D | NM\_000732.4 | NM\_000732.4:110 | 110-210 | TATCTACTGGATGAGTTCCGCTGGGAGATGGAACATAGCACGTTTCTCTCTGGCCTGGTACTGGCTACCCTTCTCTCGCAAGTGAGCCCCTTCAAGATAC | 82 | 83 | 308874;208874 |
| CD3E | NM\_000733.2 | NM\_000733.2:75 | 75-175 | AAGTAACAGTCCCATGAAACAAAGATGCAGTCGGGCACTCACTGGAGAGTTCTGGGCCTCTGCCTCTTATCAGTTGGCGTTTGGGGGCAAGATGGTAATG | 81 | 83 | 305395;205395 |
| CD3G | NM\_000073.2 | NM\_000073.2:515 | 515-615 | AGAGCTTCAGACAAGCAGACTCTGTTGCCCAATGACCAGCTCTACCAGCCCCTCAAGGATCGAGAAGATGACCAGTACAGCCACCTTCAAGGAAACCAGT | 83 | 82 | 308886;208886 |
| CD247 | NM\_198053.1 | NM\_198053.1:1490 | 1490-1590 | TGGCAGGACAGGAAAAACCCGTCAATGTACTAGGATACTGCTGCGTCATTACAGGGCACAGGCCATGGATGGAAAACGCTCTCTGCTCTGCTTTTTTTCT | 81 | 80 | 302943;202943 |
| HLA-DRA | NM\_019111.3 | NM\_019111.3:335 | 335-435 | GGCCAACATAGCTGTGGACAAAGCCAACCTGGAAATCATGACAAAGCGCTCCAACTATACTCCGATCACCAATGTACCTCCAGAGGTAACTGTGCTCACG | 81 | 81 | 308873;208873 |
| CD2 | NM\_001767.2 | NM\_001767.2:1400 | 1400-1500 | TGGGTCTCACTACAAGCAGCCTATCTGCTTAAGAGACTCTGGAGTTTCTTATGTGCCCTGGTGGACACTTGCCCACCATCCTGTGAGTAAAAGTGAAATA | 81 | 80 | 301282;201282 |
| CD4 | NM\_000616.3 | NM\_000616.3:835 | 835-935 | AGACATCGTGGTGCTAGCTTTCCAGAAGGCCTCCAGCATAGTCTATAAGAAAGAGGGGGAACAGGTGGAGTTCTCCTTCCCACTCGCCTTTACAGTTGAA | 82 | 82 | 308876;208876 |
| CD8A | NM\_001768.5 | NM\_001768.5:1320 | 1320-1420 | GCTCAGGGCTCTTTCCTCCACACCATTCAGGTCTTTCTTTCCGAGGCCCCTGTCTCAGGGTGAGGTGCTTGAGTCTCCAACGGCAAGGGAACAAGTACTT | 83 | 83 | 306921;206921 |
| CD8B | NM\_004931.3 | NM\_004931.3:440 | 440-540 | CAGCTGAGTGTGGTTGATTTCCTTCCCACCACTGCCCAGCCCACCAAGAAGTCCACCCTCAAGAAGAGAGTGTGCCGGTTACCCAGGCCAGAGACCCAGA | 82 | 82 | 308866;208866 |
| ICAM1 | NM\_000201.1 | NM\_000201.1:1990 | 1990-2090 | GAAATACTGAAACTTGCTGCCTATTGGGTATGCTGAGGCCCACAGACTTACAGAAGAAGTGGCCCTCCATAGACATGTGTAGCATCAAAACACAAAGGCC | 81 | 80 | 300024;200024 |
| ITGAL(LFA-1) | NM\_002209.2 | NM\_002209.2:3905 | 3905-4005 | GTGAGGGCTTGTCATTACCAGACGGTTCACCAGCCTCTCTTGGTTTCCTTCCTTGGAAGAGAATGTCTGATCTAAATGTGGAGAAACTGTAGTCTCAGGA | 80 | 83 | 311572;211572 |
| CTLA4 | NM\_005214.3 | NM\_005214.3:405 | 405-505 | AGTCTGTGCGGCAACCTACATGATGGGGAATGAGTTGACCTTCCTAGATGATTCCATCTGCACGGGCACCTCCAGTGGAAATCAAGTGAACCTCACTATC | 82 | 81 | 302935;202935 |
| PTPRC | NM\_002838.2 | NM\_002838.2:2340 | 2340-2440 | CTCGATGTGAAGAAGGAAACAGGAACAAGTGTGCAGAATACTGGCCGTCAATGGAAGAGGGCACTCGGGCTTTTGGAGATGTTGTTGTAAAGATCAACCA | 79 | 78 | 306033;206033 |
| ITK | NM\_005546.3 | NM\_005546.3:3430 | 3430-3530 | GCCAGTAAAGAAGTCAGTATAGAACCACTAGCGAATAGTGTTGCTCTGGCACAGACCACTGTGGTTGATGGCATGGCCCTCCAACTTGGAATAGGATTTT | 78 | 82 | 302936;202936 |
| TRAT1 | NM\_016388.2 | NM\_016388.2:770 | 770-870 | ACAGAGGACACAGAAGGACTTGGCAGCAGGGTGATGACCTGATCATTTGTTGATGGGATGGTGGCTTACCTCTTATTCACAGCTTACACTTATGCATGCC | 81 | 82 | 302941;202941 |
| PRR7 | NM\_001174101.1 | NM\_001174101.1:393 | 393-493 | CGTGCCGCCGCCATGGTGATGTCCCAGGGCACCTACACGTTCCTCACGTGCTTCGCCGGCTTCTGGCTCATCTGGGGTCTCATCGTCCTGCTCTGCTGCT | 84 | 83 | 349399;249399 |
| ICOS | NM\_012092.2 | NM\_012092.2:640 | 640-740 | AACTCTGGCACCCAGGCATGAAGCACGTTGGCCAGTTTTCCTCAACTTGAAGTGCAAGATTCTCTTATTTCCGGGACCACGGAGAGTCTGACTTAACTAC | 81 | 79 | 302939;202939 |
| CD28 | NM\_006139.1 | NM\_006139.1:305 | 305-405 | GCTTGTAGCGTACGACAATGCGGTCAACCTTAGCTGCAAGTATTCCTACAATCTCTTCTCAAGGGAGTTCCGGGCATCCCTTCACAAAGGACTGGATAGT | 78 | 81 | 301415;201415 |
| CD80 | NM\_005191.3 | NM\_005191.3:1288 | 1288-1388 | AAAGATCTGAAGGTCCCACCTCCATTTGCAATTGACCTCTTCTGGGAACTTCCTCAGATGGACAAGATTACCCCACCTTGCCCTTTACGTATCTGCTCTT | 83 | 81 | 315973;215973 |
| CD86 | NM\_006889.3 | NM\_006889.3:146 | 146-246 | TATGGGACTGAGTAACATTCTCTTTGTGATGGCCTTCCTGCTCTCTGGTGCTGCTCCTCTGAAGATTCAAGCTTATTTCAATGAGACTGCAGACCTGCCA | 82 | 82 | 315980;215980 |
| ACTB | NM\_001101.2 | NM\_001101.2:1010 | 1010-1110 | TGCAGAAGGAGATCACTGCCCTGGCACCCAGCACAATGAAGATCAAGATCATTGCTCCTCCTGAGCGCAAGTACTCCGTGTGGATCGGCGGCTCCATCCT | 87 | 87 | 301013;201013 |
| B2M | NM\_004048.2 | NM\_004048.2:25 | 25-125 | CGGGCATTCCTGAAGCTGACAGCATTCGGGCCGAGATGTCTCGCTCCGTGGCCTTAGCTGTGCTCGCGCTACTCTCTCTTTCTGGCCTGGAGGCTATCCA | 82 | 81 | 301358;201358 |
| GAPDH | NM\_002046.3 | NM\_002046.3:35 | 35-135 | TCCTCCTGTTCGACAGTCAGCCGCATCTTCTTTTGCGTCGCCAGCCGAGCCACATCGCTCAGACACCATGGGGAAGGTGAAGGTCGGAGTCAACGGATTT | 82 | 82 | 300988;200988 |
| TBP | NM\_003194.3 | NM\_003194.3:25 | 25-125 | CGCCGGCTGTTTAACTTCGCTTCCGCTGGCCCATAGTGATCTTTGCAGTGACCCAGCAGCATCACTGTTTCTTGGCGTGTGAAGATAACCCAAGGAATTG | 79 | 78 | 300993;200993 |
| UBC | NM\_021009.3 | NM\_021009.3:1875 | 1875-1975 | TGCAGATCTTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACACCATTGAGAATGTCAAGGCAAAGATCCAAGACAAGGA | 82 | 81 | 306338;206338 |
| RPL13A | NM\_012423.2 | NM\_012423.2:720 | 720-820 | AGTCCAGGTGCCACAGGCAGCCCTGGGACATAGGAAGCTGGGAGCAAGGAAAGGGTCTTAGTCACTGCCTCCCGAAGTTGCTTGAAAGCACTCGGAGAAT | 92 | 79 | 304775;204775 |
| Tbet (TBX21) | NM\_013351.1 | NM\_013351.1:890 | 890-990 | ACACAGGAGCGCACTGGATGCGCCAGGAAGTTTCATTTGGGAAACTAAAGCTCACAAACAACAAGGGGGCGTCCAACAATGTGACCCAGATGATTGTGCT | 81 | 80 | 301952;201952 |
| GATA3 | NM\_001002295.1 | NM\_001002295.1:2835 | 2835-2935 | AAGAGTCCGGCGGCATCTGTCTTGTCCCTATTCCTGCAGCCTGTGCTGAGGGTAGCAGTGTATGAGCTACCAGCGTGCATGTCAGCGACCCTGGCCCGAC | 81 | 81 | 302821;202821 |
| RORC | NM\_001001523.1 | NM\_001001523.1:1350 | 1350-1450 | CTCATCAATGCCCATCGGCCAGGGCTCCAAGAGAAAAGGAAAGTAGAACAGCTGCAGTACAATCTGGAGCTGGCCTTTCATCATCATCTCTGCAAGACTC | 79 | 82 | 302252;202252 |
| FOXP3 | NM\_014009.3 | NM\_014009.3:1230 | 1230-1330 | GGGCCATCCTGGAGGCTCCAGAGAAGCAGCGGACACTCAATGAGATCTACCACTGGTTCACACGCATGTTTGCCTTCTTCAGAAACCATCCTGCCACCTG | 81 | 79 | 310104;210104 |
| Vitamin D receptor (VDR) | NM\_000376.2 | NM\_000376.2:4385 | 4385-4485 | GCTAACTGGAAGCATGTAGGAGAATCCAAGCGAGGTCAACAGAGAAGGCAGGAATGTGTGGCAGATTTAGTGAAAGCTAGAGATATGGCAGCGAAAGGAT | 82 | 79 | 301901;201901 |

**Abbreviations:** NSID-Nanostring probe ID; Tm CP-melting temperature of capture probe; Tm RP-melting temperature of reporter probe; TRAC, T-cell Receptor alpha constant; TRAV, T-cell Receptor alpha variable; TRBC, T-cell Receptor beta constant; TRBV, T-cell Receptor beta variable; TRDV, T-cell Receptor delta variable; TRGC, T-cell Receptor gamma constant; TRGV; T-cell Receptor gamma variable; IPAF, Ice protease-activating factor/NLR family Card domain containing 4 (NLRC4); NLRP12Nucleotide-binding domain, leucine rich repeat containing receptor (NLR) Family Pyrin Domain Containing 12; TLR, Toll-like receptor; IL-7(R), Interleukin-7 (receptor); SOCS1, Suppressor Of Cytokine Signaling 1; NALP-1, NACHT, LRR and PYD domains-containing protein 1**;** ASC, Apoptosis-associated speck-like protein containing a CARD (Caspase activation and recruitment domains)**;** IL-10, Interleukin-10; COX-1/PTGS, Cyclooxygenase-1/prostaglandin-endoperoxide synthase; pypaf-7, PYRIN-containing Apaf-1-like proteins; S100A9, S100 calcium-binding protein A9; IFN-ϒ, Interferon gamma; CD, Cluster of Differentiation; COX-1/PTGS, Cyclooxygenase-1/prostaglandin-endoperoxide synthase; CTLA4, Cytotoxic T Lymphocyte-associated protein 4 (CD152); GATA3, Glycine, Alanine, Thymine, Alanine binding protein 3; ICOS, Inducible T-cell costimulator; ITK, Interleukin-2-inducible T-cell kinase;; Tbet, T-box transcription factor.

**Supplementary Figures**

**Supplementary Figure 1**

**Cohort 1 (Uganda)**

**Cohort 2 (South Africa)**

**Flow chart indicating study designs and numbers of participants in each analysis.**

 **Supplementary Figure 2**



A



 **Analysis strategy for neutrophil activation measurement via flow cytometry: A.** An aliquot of whole blood (200mcl) was stained with fluorochromes, red cells were lysed and the samples were fixed before acquisition on a BD Fortessa flow cytometer. **I**. Singlet signals were gated by Forward Scatter (FSC) Area versus FSC Height. **II**. Dead cells were excluded using eFluor450 Viability Dye (or ViViD viability dye) versus Side Scatter (SSC). **III**. Eosinophils, defined as CD16-negative with high SSC, were excluded. **IV**. Neutrophils were defined as CD66a,c,e-PE/CD11b-PE-Cy7 positive events. The CD11b, CD16, CD62L, CD66a,c,e and IL-8RA MFI of neutrophils was then determined.

B

**B.** Representative histogram of CD62L MFI in one IRIS patient and one non-IRIS control at Week 2 time-point.

**Supplementary Figure 3**

****

**Increased expression of genes in TB-IRIS patients compared to the non-IRIS controls:** Graphs show the changes from ART initiation to two weeks of the four most over-expressed genes in TB-IRIS patients (n = 10 at baseline/ART initiation (B), n = 17 at Week 2 (W2)) (red) versus non-IRIS controls (n = 15 at baseline/ART initiation, n = 17 at Week 2) (black). Values were obtained from 100 ng of total RNA using nCounter technology and were log2 transformed. Mann Whitney and Wilcoxon tests were used and p values < 0.05 were considered significant (\* p < 0.05, \*\* p < 0.01).

Abbreviations: ASC; Apoptosis-associated speck-like protein containing a Caspase Recruitment Domain (CARD); IL-10, Interleukin-10; COX-1/PTGS, Cyclooxygenase-1/prostaglandin-endoperoxide synthase; NLRP-12//pypaf-7, NOD-like receptor (NLR) family pyrin domain containing 12/ PYRIN-containing Apaf-1-like proteins; S100A9, S100 calcium-binding protein A9.

**Supplementary Figure 4**

****

**Analysis of plasma HNP1-3 levels in TB-IRIS and Non IRIS controls for the whole Ugandan cohort.**

Human Neutrophil Peptides (HNP) 1-3 plasma concentrations were quantified using ELISAin the whole Ugandan cohort (TB-IRIS patients (n =39 at ART initiation, n = 39 at W2, n = 33 at Month (M) 3 and n = 30 at M6) and non-IRIS controls (n =39 at ART initiation, n = 35 at W2, n = 30 at Month (M) 3 and n = 30 at M6)). Lines represent medians and p-values (\*\*\* p < 0.001, \*\*\*\* p < 0.0001) were derived from Mann-Whitney and Wilcoxon tests.