**Supplemental Digital Content 1.** Details for protease assays and ELISA used for human milk and gastric samples.

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| Type of assay | Specific kit and manufacturer | Amount of samples (μL) | Reaction time(min) | Standard | Range of the standard curve |
| Proteolysis (fluorescamine) | -1 | 15 | 0 | L-leucine |  0.5–20 mM |
| General protease activity | Cat#CAK1077, Cat#CAK1078Cohesion Biosciences2 | 20 | 15 | L-tyrosine | 31.2–500 µM |
| Pepsin/cathepsin D activity  | Cat#K148-100, BioVision3 | 10 | 60 | (7-methoxycoumarin-4-yl)acetic acid | 250–1,250 µM  |

1 Components were purchased separately, as described in the methods.

2 Cohesion Biosciences, London, UK; Cat#CAK1077 was used to determine the general protease activity in milkinc and gastric samples after adjusting the buffer from pH 3.5 to pH 4.5, whereas Cat#CAK1078 was used for human milk after adjusting the buffer pH from 7.5 to 6.5.

3 BioVision, Milpitas, CA, USA; Enzium Inc., Philadelphia, PA, USA.