

CLAIMS

What is claimed is:

1. A fusion protein comprising Component A and/or Component B, and optionally Component C and/or Component D;

wherein Component A comprises Component Y, Component Z₂ and Component Z₃;

wherein Component B comprises Component X', Component Z₂' and Component Z₃';

wherein Component C comprises Component X and Component C_L' and

wherein Component D comprises Component Q and Component C_L.

2. The fusion protein of claim 1, wherein Component B further comprises Component Z₁' or wherein Component A further comprises Component Z₁.

3. The fusion protein of any one of claims 1-2, wherein:

(i) Component Y comprises a ligand domain, a receptor domain, an scFv domain or a lipocalin domain;

(ii) Component X' comprises a virus-derived peptide, a ligand-derived, a receptor-derived peptide, or an HTS-selected peptide; or

(iii) Component X comprises a virus-derived peptide, a ligand-derived, a receptor-derived peptide, or an HTS-selected peptide.

4. The fusion protein of claim 3, wherein Component Y comprises at least a portion of PD-1, CD112R, CD113 or MHC-I polypeptide-related sequence A (MICA).

5. The fusion protein of claim 3, wherein the fusion protein binds PD-L1 or PD-L2.

6. The fusion protein of claim 3, wherein Component X' comprises at least a portion of vMIP-11.

7. The fusion protein of claim 6, wherein Component X' comprises V1 or V1delta.

8. The fusion protein of claim 3, wherein Component X comprises V1 or V1delta.
9. The fusion protein of any one of claims 3 and 6-8, wherein the fusion protein binds CXCR4.
10. The fusion protein of any one of claims 1-9, wherein the fusion protein binds an Fc receptor or ligand on an immune cell.
11. The fusion protein of any one of claims 1-10, wherein:
- (i) Component X' comprises at least a portion of PD-1, TIGIT, CD96, CD112R, CD113, CD155, CD111, CD112, MHC-1 polypeptide-related sequence A (MICA), NKG2A (CD94), MICB, ULBPI-5, TIM-3, CD226, NECL2, CRT AM, CD80, CTLA-4, KIR2DL1/2/3, or CD48;
 - (ii) Component Y comprises at least a portion of PD-1, TIGIT, CD96, CD112R, CD113, CD155, CD111, CD112, MHC-I polypeptide-related sequence A (MICA), NKG2A (CD94), MICB, ULBPI-5, TIM-3, CD226, NECL2, CRT AM, CD80, CTLA-4, KIR2DL1/2/3, or CD48;
 - (iii) Component X comprises at least a portion of PD-1, TIGIT, CD96, CD112R, CD113, CD155, CD111, CD112, MHC-I polypeptide-related sequence A (MICA), NKG2A (CD94), MICB, ULBPI-5, TIM-3, CD226, NECL2, CRTAM, CD80, CTLA-4, KIR2DL1/2/3, or CD48; and/or
 - (iv) Component Q comprises at least a portion of PD-1, TIGIT, CD96, CD112R, CD113, CD155, CD111, CD112, MHC-I polypeptide-related sequence A (MICA), NKG2A (CD94), MICB, ULBPI-5, TIM-3, CD226, NECL2, CRTAM, CD80, CTLA-4, KIR2DL1/2/3, or CD48.
12. The fusion protein of claim 1, wherein:
- (i) Component A comprises the amino acid sequence of any one of SEQ ID NOs: 14-22 and/or wherein Component B comprises the amino acid sequence of any one of SEQ ID NOs: 32-35; or
 - (ii) wherein Component B comprises the amino acid sequence of any one of SEQ ID NOs: 49-55 and/or wherein Component C comprises the amino acid sequence of any one of SEQ IDNOs: 57-63.

13. A fusion protein comprising Component A, Component B, and Component C;
wherein:

Component A comprises Component Y, Component Z₂ and Component Z₃; and
Component B comprises Component X', Component Z₂' and Component Z₃'; and
Component C comprises Component X, and Component C'_L,
Component Y comprises at least a portion of PD-1,
Component Z₂ and Component Z₂' comprise CH2 domains of human Fc,
Component Z₃ and Component Z₃' comprise CH3 domains of human Fc,
Component X' and Component X comprise at least a portion of vMIP-11, and
Component C'_L comprises at least one CH1 domain of human IgG1 kappa.

14. The fusion protein of claim 13, wherein the fusion protein is capable of binding i) PDL1 or PD-L2, ii) CXCR4, and iii) an Fc receptor or ligand on an immune cell.

15. The fusion protein of any one of claims 1-14 for use in treating a proliferative disorder in a patient in need of such treatment.