

WHAT IS CLAIMED IS:

1. A Signal-regulatory protein alpha (SIRP α)-4-1BB ligand (41BBL) fusion protein being characterized by a single amino acid linker between said SIRP α and said 41BBL; and/or being in a form of ~~at least~~ a homo-trimer.

2. A Signal regulatory protein α (SIRP α)-4-1BB ligand (41BBL) fusion protein being characterized by a single amino acid linker between said SIRP α and said 41BBL.

3. A Signal regulatory protein α (SIRP α)-4-1BB ligand (41BBL) fusion protein being in a form of a homo-trimer.

24. The SIRP α -41BBL fusion protein of any one of claims 1-2, wherein the linker is glycine.

53. The SIRP α -41BBL fusion protein of any one of claims 1-24, wherein said fusion protein is capable of at least one of:

- (i) binding CD47 and 4-1BB;
- (ii) activating said 4-1BB signaling pathway in a cell expressing said 4-1BB;
- (iii) co-stimulating immune cells expressing said 4-1BB; and/or
- (iv) enhancing phagocytosis of pathologic cells expressing said CD47 by phagocytes compared to same in the absence of said SIRP α -41BBL fusion protein.

46. The SIRP α -41BBL fusion protein of any one of claims 1-35, wherein said SIRP α -41BBL fusion protein amino acid sequence comprises SEQ ID NO: 1.

57. A polynucleotide encoding the SIRP α -41BBL fusion protein of any one of claims 1-64.

86. A nucleic acid construct comprising the polynucleotide of claim 75, and a regulatory element for directing expression of said polynucleotide in a host cell.

~~79.~~ A host cell comprising the SIRP α -41BBL fusion protein of any one of claims 1-~~46~~ or the polynucleotide or the nucleic acid construct of any one of claims ~~5-67~~-8.

~~810.~~ A method of in-vitro producing a SIRP α -41BBL fusion protein, the method comprising expressing in a host cell the polynucleotide or the nucleic acid construct of any one of claims ~~5-67~~-8.

~~911.~~ The method of claim ~~810~~, comprising isolating the fusion protein.

~~1012.~~ The SIRP α -41BBL fusion protein of any one of claims 1-~~64~~, the polynucleotide or the nucleic acid construct of any one of claims ~~5-67~~-8 or the host cell of claim ~~97~~ for use in treating cancer, wherein diseased cells of said subject express CD47.

~~11. The SIRP α -41BBL fusion protein, the polynucleotide or the nucleic acid construct or the host cell for use of claim 10, wherein diseased cells of said subject express CD47.~~

~~1213.~~ A method of activating immune cells, the method comprising in-vitro activating immune cells in the presence of the SIRP α -41BBL fusion protein of any one of claims 1-~~64~~, ~~the polynucleotide or the nucleic acid construct of any one of claims 5-6 or the host cell of claim 7.~~

~~1314.~~ The method of claim ~~1213~~, wherein said activating is in the presence of cells expressing CD47 or exogenous CD47.

~~14. Immune cells for use in adoptive transfer to a subject in need thereof, wherein said immune cells are obtainable by the method of any one of claims 12-13.~~