

CONSTRUCTS HAVING A SIRP-ALPHA DOMAIN OR VARIANT THEREOF

ABSTRACT

The present disclosure features signal-regulatory protein α (SIRP- α) polypeptides and constructs that are useful, e.g., to target a cell (e.g., a cancer cell or a cell of the immune system), to increase phagocytosis of the target cell, to eliminate immune cells such as regulatory T-cells, to kill cancer cells, to treat a disease (e.g., cancer) in a subject, or any combinations thereof. The SIRP- α constructs include a high affinity SIRP- α D1 domain or variant thereof that binds CD47 with higher affinity than a wild-type SIRP- α . The SIRP- α polypeptides or constructs include a SIRP- α D1 variant fused to an Fc domain monomer, a human serum albumin (HSA), an albumin-binding peptide, or a polyethylene glycol (PEG) polymer. Compositions provided herein include (i) a polypeptide including a signal-regulatory protein α (SIRP- α) D1 variant and (ii) an antibody.

[FIG. 3]