Recombinant SAMD1 protein (His tag)

Catalog Number	547531
Synonyms	SAM domain-containing protein 1; Atherin
Species	Human
Expression System	E. coli
Accession	Q6SPF0
Molecular Weight	Predictes a molecular mass of 12.60 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 13 kDa band.

Product Information

Sequence Region	1-99
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-99 aa (Q6SPF0) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human SAMD1 (Sterile alpha motif domain-containing protein 1) Fragment (1-99 aa) is a high-purity protein designed for studying transcriptional regulation and atherogenesis. This fragment fully encompasses the SAMD1-like winged helix (WH) domain, making it an ideal tool for domain-specific functional assays, protein interaction studies, and epigenetic research. Sterile alpha motif domain-containing protein 1 (SAMD1) is a human protein that functions as an unmethylated CpG island-binding protein localized to H3K4me3-decorated CGIs, where it acts as a transcriptional repressor. SAMD1 tethers L3MBTL3 to chromatin and interacts with the KDM1A histone demethylase complex to modulate H3K4me2 and H3K4me3 levels at CGIs. Additionally, it plays a role in atherogenesis by binding with LDL on the cell surface and promoting LDL oxidation, leading to foam cell formation. SAMD1 is found in the nucleus, chromosome, and secreted compartments, with localization in the extracellular compartment and foam cell cytoplasm in atherosclerotic lesions. This positions SAMD1 as a key regulator in epigenetic mechanisms and cardiovascular disease pathways.