Recombinant THNS2 protein (His tag)

Catalog Number	543070
Synonyms	TSH2; Secreted osteoclastogenic factor of activated T-cells; SOFAT
Species	Human
Expression System	E. coli
Accession	Q86YJ6
Molecular Weight	Predictes a molecular mass of 55.78 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 56 kDa band.

Product Information

Sequence Region	1-484
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 1-484 aa (Q86YJ6) 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 Threonine synthase-like 2 (TSH2) fragment (amino acids 1-484) is a high-purity protein designed for structural and biochemical studies. This fragment, derived from the full-length TSH2 (also known as SOFAT), represents a stable and soluble unit ideal for investigating its dual roles in amino acid metabolism and immune-mediated bone regulation. Threonine synthase-like 2 (TSH2) in humans exhibits isoform-specific functions. Isoform 1 acts as a catabolic phospho-lyase, degrading O-phospho-threonine to alpha-ketobutyrate, ammonia, and phosphate, playing a role in amino acid metabolism. In contrast, the secreted isoform SOFAT functions as a potent inducer of osteoblastic IL6 production, potentially exacerbating inflammation and bone turnover under inflammatory conditions. The SOFAT isoform is secreted by activated T-cells via a calcineurin-independent pathway, highlighting its significance in immune-bone interactions. The recombinant fragment (1-484) encompasses key functional regions, enabling researchers to explore these distinct biological activities in controlled experimental settings.