Recombinant LST8 protein (His tag)

Catalog Number	548129
Synonyms	TORC subunit LST8; G protein beta subunit-like; Gable; Protein GbetaL; Mammalian lethal with SEC13 protein 8; mLST8
Species	Human
Expression System	E. coli
Accession	Q9BVC4
Molecular Weight	Predictes a molecular mass of 37.53 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 38 kDa band.

Product Information

Sequence Region	1-326
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 1-326 aa (Q9BVC4) 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 Target of Rapamycin Complex Subunit LST8 (TORC subunit LST8), also known as MLST8, is a high-purity protein fragment designed for research on mTOR signaling pathways. This 326-amino acid fragment (residues 1-326) represents a stable, soluble unit ideal for structural studies, biochemical assays, and investigating mTOR complex regulation in cell growth, survival, and metabolic processes. MLST8 is a critical subunit of both mTORC1 and mTORC2 complexes, which are central regulators of cell growth, proliferation, and survival in response to nutrient availability and hormonal signals. mTORC1 promotes anabolic processes such as protein, lipid, and nucleotide synthesis while inhibiting catabolic pathways like autophagy, particularly when recruited to lysosome membranes during nutrient-rich conditions. mTORC2 responds to growth factors to regulate cytoskeletal organization, lipogenesis, and activates key kinases including AKT, PKC, and SGK1. MLST8 directly interacts with MTOR to enhance its kinase activity and stabilizes complex interactions. The protein localizes to lysosome membranes and cytoplasm, with its lysosomal targeting being amino acid-dependent through interactions with Rag GTPases. This recombinant fragment provides researchers with a essential tool for dissecting mTOR signaling mechanisms in health and disease.