Recombinant BHMT1 protein (His tag)

Catalog Number	538652
Species	Human
Expression System	E. coli
Accession	Q93088
Molecular Weight	Predictes a molecular mass of 46.66 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 48 kDa band.

Product Information

Sequence Region	1-406
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 1-406 aa (Q93088) 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 Betaine--homocysteine S-methyltransferase 1 (BHMT) fragment (amino acids 1-406) from Homo sapiens. This high-purity protein encompasses the full-length functional domain, including the homocysteine-binding region, making it an ideal tool for investigating homocysteine metabolism, methionine synthesis, and choline oxidation pathways in biochemical and cellular studies. Betaine--homocysteine S-methyltransferase 1 (BHMT) is a key enzyme in homocysteine metabolism, catalyzing the conversion of betaine and homocysteine to dimethylglycine and methionine. This reaction is essential for the irreversible oxidation of choline and plays a critical role in regulating homocysteine levels, which is important for cardiovascular and neurological health. BHMT is predominantly localized in the cytoplasm and cytosol, with a minor fraction present in the nucleus. Under oxidative stress, the protein translocates to the nucleus, suggesting potential regulatory roles beyond metabolic functions. The provided recombinant fragment (1-406) includes the complete homocysteine-binding domain, enabling targeted research into its enzymatic activity and domain-specific interactions.