Recombinant ACKMT protein (His tag)

Catalog Number	545212
Synonyms	Protein N-lysine methyltransferase FAM173B; hFAM173B
Species	Human
Expression System	E. coli
Accession	Q6P4H8
Molecular Weight	Predictes a molecular mass of 21.68 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 22 kDa band.

Product Information

Sequence Region	59-233
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 59-233 aa (Q6P4H8) 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 ATP synthase subunit C lysine N-methyltransferase (FAM173B) fragment (residues 59-233) is a high-purity protein designed for structural and biochemical studies. This 175-amino acid fragment represents a stable, soluble domain of the mitochondrial enzyme responsible for trimethylating ATP synthase subunit C, enabling research into mitochondrial respiration and chronic pain mechanisms. ATP synthase subunit C lysine N-methyltransferase (FAM173B) is a mitochondrial membrane protein that catalyzes the trimethylation of ATP synthase subunit C isoforms ATP5MC1 and ATP5MC2. This post-translational modification is essential for proper assembly of the ATP synthase complex and mitochondrial respiratory function. The enzyme localizes to mitochondrial cristae as a single-pass membrane protein and has been clinically linked to chronic pain pathways. Research demonstrates that its methyltransferase activity in sensory neuron mitochondria promotes persistent inflammatory and neuropathic pain through reactive oxygen species production and spinal cord microglia engagement, highlighting its significance in both mitochondrial biology and pain neuroscience.