Recombinant PTER protein (His tag)

Catalog Number	545647
Synonyms	Phosphotriesterase-related protein
Species	Human
Expression System	E. coli
Accession	Q96BW5
Molecular Weight	Predictes a molecular mass of 40.68 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	1-349
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 1-349 aa (Q96BW5) 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 N-acetyltaurine hydrolase (EC 3.1.-.-), also known as phosphotriesterase-related protein (PTER), is a key enzyme fragment (residues 1-349) from Homo sapiens, designed for structural and biochemical studies. This fragment supports research into feeding regulation and metabolic pathways by enabling analysis of its hydrolase activity on substrates like N-acetyltaurine. N-acetyltaurine hydrolase, encoded by the PTER gene in humans, plays a critical role in regulating feeding behavior and energy balance by catalyzing the hydrolysis of N-acetyltaurine into taurine and acetate. This enzymatic activity contributes to anorexigenic and anti-obesity effects, which are mediated through the GFRAL receptor and GDF15 signaling pathway. Additionally, the enzyme exhibits activity on other N-acetyl amino acids (e.g., Met, Ile, Leu, Val) and N-propionyltaurine, albeit at reduced rates. The full-length protein is localized in the cytoplasm and cytosol, underscoring its involvement in intracellular metabolic processes. This recombinant fragment provides a stable and soluble unit for investigating the enzyme's mechanism and physiological relevance.