Recombinant HEXA protein (His tag)

Catalog Number	537441
Synonyms	Beta-N-acetylhexosaminidase subunit alpha; Hexosaminidase subunit A; N-acetyl-beta-glucosaminidase subunit alpha
Species	Human
Expression System	E. coli
Accession	P06865
Molecular Weight	Predictes a molecular mass of 52.22 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 54 kDa band.

Product Information

Sequence Region	89-529
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 89-529 aa (P06865) 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	This product is a recombinant fragment of human Beta-hexosaminidase subunit alpha (EC 3.2.1.52), encompassing amino acids 89-529. It is designed as a stable, soluble unit ideal for structural studies and enzymatic assays, enabling researchers to investigate glycoside hydrolase activity with high precision. Beta-hexosaminidase subunit alpha, encoded by the HEXA gene, is a lysosomal enzyme that hydrolyzes non-reducing terminal N-acetyl-D-hexosamine and sulfated N-acetyl-D-hexosamine residues from glycoconjugates, including oligosaccharides, neutral glycolipids, and mucopolysaccharides. It plays a critical role in glycosphingolipid metabolism, with isozyme A specifically degrading GM2 gangliosides in conjunction with the GM2A activator protein, while isozyme S acts on anionic bis-sulfated glycans and sulfated glycosphingolipids. This enzyme is localized to the lysosome, where it contributes to the breakdown of complex carbohydrates, and its dysfunction is linked to metabolic disorders such as Tay-Sachs disease.