Recombinant CHIA protein (His tag)

Catalog Number	548182
Synonyms	AMCase; Lung-specific protein TSA1902
Species	Human
Expression System	E. coli
Accession	Q9BZP6
Molecular Weight	Predictes a molecular mass of 51.72 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 52 kDa band.

Product Information

Sequence Region	22-476
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 22-476 aa (Q9BZP6) 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 Acidic Mammalian Chitinase (AMCase) Fragment (residues 22-476) is a high-purity protein designed for research on chitin degradation and immune responses. This fragment includes the complete GH18 catalytic domain and chitin-binding type-2 domain, making it an ideal tool for studying Th2-mediated inflammation, pathogen defense mechanisms, and epithelial cell survival pathways. Acidic mammalian chitinase (AMCase), encoded by the CHIA gene in humans, is a secreted enzyme (EC 3.2.1.14) that hydrolyzes chitin and chitotriose. It plays critical roles in innate immunity by defending against nematodes, fungi, and other pathogens. AMCase is involved in T-helper cell type 2 (Th2) immune responses, where it contributes to IL-13-mediated inflammation and stimulates chemokine production in pulmonary epithelial cells. The protein also exhibits protective functions by inhibiting epithelial cell apoptosis and promoting AKT1 phosphorylation, with its carbohydrate-binding activity being essential for these roles as demonstrated by allosamidin inhibition. While isoform 1 is secreted in an EGFR-dependent manner, isoforms 2 and 3 are cytoplasmic. This recombinant fragment encompasses key functional domains to facilitate targeted investigation of AMCase's biological activities.