

AMCase/CHIA Protein, Mouse, Recombinant (His)

General Information

Synonyms:	CHIT2;Chia1;AMCase;YNL;Acidic mammalian chitinase;CHIA;EC 3.2.1.14
Protein Construction:	Tyr22-Pro473
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q91XA9
Molecular Weight:	51 kDa (predicted). Due to glycosylation, the protein migrates to 53-60 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Acidic mammalian chitinase (AMCase) and chitotriosidase (CHIT-1) are two active chitinases expressed in humans. The chitinase activity of AMCase was found to be causative in allergic inflammation and its expression was found to be induced by interleukin-13. CHIT-1 is expressed by phagocytic cells and extremely high levels are seen in lysosomal storage diseases. The expression of AMCase and CHIT-1 were differently modulated in HMMs at different stage of maturation.

Reference

Di Rosa M, De Gregorio C, Malaguarnera G, Tuttobene M, Biazzo F, Malaguarnera L. Evaluation of AMCcase and CHIT-1 expression in monocyte macrophages lineage. Mol Cell Biochem. 2013 Feb;374(1-2):73-80. doi: 10.1007/s11010-012-1506-5. Epub 2012 Nov 6. PMID: 23129258.

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