

AMCase/CHIA Protein, Human, Recombinant (His)

General Information

Synonyms:	YNL;AMCase;Chia1;CHIA;Acidic mammalian chitinase;EC 3.2.1.14;CHIT2
Protein Construction:	Tyr22-Ala476
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9BZP6-1
Molecular Weight:	51.2 kDa (predicted). Due to glycosylation, the protein migrates to 55-60 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. Despite that AMCase expression in the inflammation is under investigation, little is known regarding its regulation during macrophages' full maturation and polarization.

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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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481