Data Sheet (Cat.No.TMPY-01460)

TargetMol

ABHD4 Protein, Human, Recombinant (His)

General Information

Synonyms:	abhydrolase domain containing 4;ABH4
Protein Construction:	A DNA sequence encoding the full length of human ABHD4 (NP_071343.2) (Met 1-Asp 342) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q8TB40-1
Molecular Weight:	41 kDa (predicted); 40 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 82 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 100 mM NaCl, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.2 mg/mL. Reconstitution conditions may vary depending on the lot.

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

Abhydrolase domain containing 4 (ABHD4), also known as alpha/beta-hydrolase 4 (ABH4) , or lyso-N-acylphosphatidylethanolamine lipase, which belongs to the ABHD4/ABHD5 subfamily of peptidase S33 family. Abhydrolase domain containing (ABHD) gene was a small group belongs to alpha/beta hydrolase superfamily. Known members of this group are all found to be involved in important biochemical processes and related to various diseases. The alpha/beta-hydrolase 4 (ABH4) is a lysophospholipase/phospholipase B that selectively

hydrolyzes N-acyl phosphatidylethanolamines (NAPEs) and lysoNAPEs. ABH4 accepts lysoNAPEs bearing both saturated and polyunsaturated N-acyl chains as substrates and displays a distribution that closely mirrors lysoNAPE-lipase activity in mouse tissues. The existence of an NAPE-PLD-independent route for NAE biosynthesis and suggest that ABH4 plays a role in this metabolic pathway by acting as a (lyso)NAPE-selective lipase.

Reference

Li F,et al.(2009) An unannotated alpha/beta hydrolase superfamily member, ABHD6 differentially expressed among cancer cell lines. Mol Biol Rep. 36(4): 691-6.

Simon G.M,et al.(2006) Endocannabinoid biosynthesis proceeding through glycerophospho-N-acyl ethanolamine and a role for alpha/beta hydrolase 4 in this pathway. J. Biol. Chem. 281: 26465-72.

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