

HEXB/Hexosaminidase B Protein, Human (HEK293, His)

Cat. No.:	HY-P74890
Synonyms:	Beta-hexosaminidase subunit beta; HCC-7; HEXB
Species:	Human
Source:	HEK293
Accession:	P07686 (A43-M556)
Gene ID:	3074
Molecular Weight:	60-66 kDa

PROPERTIES

Biological Activity	Measured by its ability to hydrolyze 4methylumbelliferylNacetyl β Dglucosaminide (4MUGlcNAc) and the specific activity is > 3000 pmols/min/ μ g.
Appearance	Solution.
Formulation	Supplied as a 0.2 μ m filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

HEXB (Hexosaminidase B) protein exhibits hydrolytic activity towards the non-reducing end N-acetyl-D-hexosamine and/or sulfated N-acetyl-D-hexosamine residues found in various glycoconjugates, including oligosaccharide moieties from proteins, neutral glycolipids, and specific mucopolysaccharides. Notably, the B isozyme demonstrates efficient hydrolysis of neutral oligosaccharides, distinguishing it from other substrates. While isozyme A is responsible for the degradation of GM2 gangliosides in the presence of GM2A, isozyme B does not participate in this process. During fertilization, HEXB, specifically isozyme B, plays a crucial role in the zona block to polyspermy. It is localized in the cortical granules of non-activated oocytes and is exocytosed during the cortical reaction triggered by oocyte activation. This exocytosis results in the inactivation of the sperm galactosyltransferase-binding site, contributing to the prevention of sperm binding to the zona pellucida and ensuring the integrity of the zona block to polyspermy.

Caution: Product has not been fully validated for medical applications. For research use only.

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