

Hexosaminidase A Alpha (HEXa) Active Protein | HEXa active protein

Active Hexosaminidase A Alpha (HEXa)

CATALOG # AAA148166	HOST E. coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Hexosaminidase A Alpha (HEXa); Active Hexosaminidase A Alpha (HEXa); TSD; Hex-A; Tay Sachs Disease; GM2 Gangliosidosis; Beta-Hexosaminidase Subunit Alpha; Beta-N-Acetylhexosaminidase Subunit Alpha; N-Acetyl-Beta-Glucosaminidase Alpha; HEXa active protein

PRODUCT SPECIFICATIONS

Host	E. coli
Purity/Purification	>98%
Form/Format	20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Applicable Applications for HEXa active protein	Activity Assay, Cell Culture
Organism Species	Mus musculus (Mouse)
Source	Prokaryotic expression.
Residues	Leu319~Thr528
Tags	N-terminal His-tag
Predicted isoelectric point	6.3
Usage	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

Sequence

Figure 4. Sequence

ESFYIQTLLD

IVSDYDKGVV

FRALLSAPWY

LNVRKYGPDW

KDMYKVEPLA

FHGTPEQKAL

VIGGEACMWG

EYVDSTNLVP

RLWPRAGAVA

ERLWSSNLTT

NIDFAFKRLS

HFRCELVRRG

IQAQPISVGY

CEQEFEQT

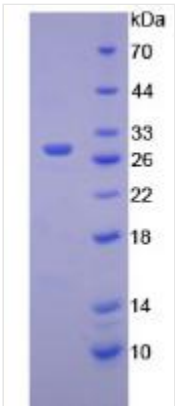
LG

GDEVDFTCWK

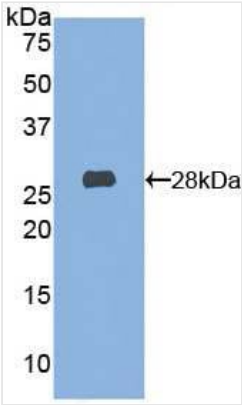
SNPNIQAFMK

KKGFTDFKQL

Sequence
Figure 4. Sequence



SDS-PAGE
Figure 2. SDS-PAGE; Sample: Active recombinant HEXa, Mouse



WB (Western Blot)
Figure 3. Western Blot; Sample: Recombinant HEXa, Mouse; Antibody: Rabbit Anti-Mouse HEXa Ab

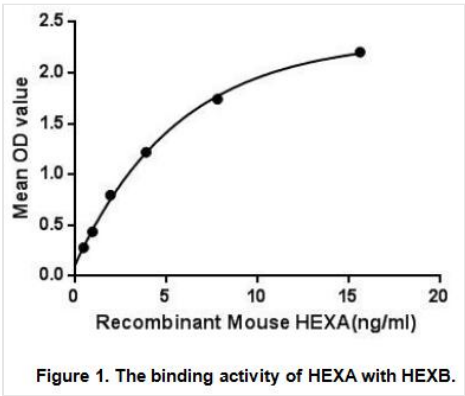


Figure 1. The binding activity of HEXA with HEXB.

Activity

Figure 1. Activity DataActivity: Hexosaminidase A Alpha (HEXa) is a lysosomal enzyme. There are three predominant isoenzymes: hexosaminidase A, B and S. Hexosaminidase A and the cofactor GM2 activator protein catalyze the degradation of the GM2 gangliosides and other molecules containing terminal N-acetyl hexosamines. The enzymes are composed of two alpha and/or beta subunits, which are coded by HEXA and HEXB genes, respectively. Even though the alpha and beta subunits of hexosaminidase A can both cleave GalNAc residues, only the alpha subunit which contains a key residue, Arg-424 is able to hydrolyze GM2 gangliosides. Hexosaminidase A (alpha polypeptide) plays a critical role in the brain and spinal cord (central nervous system). Besides, Hexosaminidase B Beta (HEXB) has been identified as an interactor of HEXA, thus a binding ELISA assay was conducted to detect the interaction of recombinant mouse HEXA and recombinant mouse HEXB. Briefly, HEXA were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to HEXB-coated microtiter wells and incubated for 2h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-HEXA pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50DL stop solution to the wells and read at 450nm immediately. The binding activity of of HEXA and HEXB was shown in Figure 1, and this effect was in a dose dependent manner.

ADDITIONAL INFORMATION

Product Categories/Family for HEXa active protein	Enzyme & Kinase; Metabolic pathway
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NCBI AND UNIPROT INFORMATION

NCBI GI #	67514549
NCBI GeneID	15211

NCBI Accession #	NP_034551.2
NCBI GenBank Nucleotide #	NM_010421.5
UniProt Accession #	P29416 ; Q64246 ; Q91XG3
Molecular Weight	Predicted Molecular Mass: 28.2kDa Accurate Molecular Mass: 28kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	beta-hexosaminidase subunit alpha preproprotein
NCBI Official Synonym Full Names	hexosaminidase A
NCBI Official Symbol	Hexa
NCBI Official Synonym Symbols	Hex-1
NCBI Protein Information	beta-hexosaminidase subunit alpha
UniProt Protein Name	Beta-hexosaminidase subunit alpha
UniProt Gene Name	Hexa
UniProt Synonym Gene Names	Hexosaminidase subunit A

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/hexosaminidase-a-alpha-hexa/148166>