

**Anti-HEXA Antibody**  
Catalog # ABO11094

**Specification**

---

**Anti-HEXA Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P06865</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Beta-hexosaminidase subunit alpha(HEXA) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-HEXA Antibody - Additional Information**

**Gene ID** 3073

**Other Names**

Beta-hexosaminidase subunit alpha, 3.2.1.52, Beta-N-acetylhexosaminidase subunit alpha, Hexosaminidase subunit A, N-acetyl-beta-glucosaminidase subunit alpha, HEXA

**Calculated MW**

60703 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse<br>

**Subcellular Localization**

Lysosome.

**Protein Name**

Beta-hexosaminidase subunit alpha

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of human HEXA(191-207aa DVMAYNKLNVFHWHLVD), different from the related rat and mouse sequences by one amino acid.

**Purification**

Immunogen affinity purified.

### Cross Reactivity

No cross reactivity with other proteins

### Storage

**At -20°C for one year. After r<sup>o</sup>Constitution, at 4°C for one month. It<sup>o</sup>Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.**

### Sequence Similarities

Belongs to the glycosyl hydrolase 20 family.

## Anti-HEXA Antibody - Protein Information

Name HEXA ([HGNC:4878](#))

### Function

Hydrolyzes the non-reducing end N-acetyl-D-hexosamine and/or sulfated N-acetyl-D-hexosamine of glycoconjugates, such as the oligosaccharide moieties from proteins and neutral glycolipids, or from certain mucopolysaccharides (PubMed: [11707436](http://www.uniprot.org/citations/11707436), PubMed: [8123671](http://www.uniprot.org/citations/8123671), PubMed: [8672428](http://www.uniprot.org/citations/8672428), PubMed: [9694901](http://www.uniprot.org/citations/9694901)). The isozyme S is as active as the isozyme A on the anionic bis-sulfated glycans, the chondroitin-6- sulfate trisaccharide (C6S-3), and the dermatan sulfate pentasaccharide, and the sulfated glycosphingolipid SM2 (PubMed: [11707436](http://www.uniprot.org/citations/11707436)). The isozyme B does not hydrolyze each of these substrates, however hydrolyzes efficiently neutral oligosaccharide (PubMed: [11707436](http://www.uniprot.org/citations/11707436)). Only the isozyme A is responsible for the degradation of GM2 gangliosides in the presence of GM2A (PubMed: [8123671](http://www.uniprot.org/citations/8123671), PubMed: [8672428](http://www.uniprot.org/citations/8672428), PubMed: [9694901](http://www.uniprot.org/citations/9694901)).

### Cellular Location

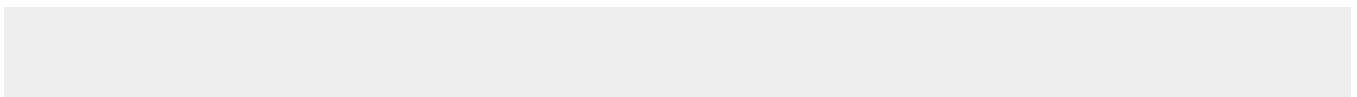
Lysosome.

## Anti-HEXA Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

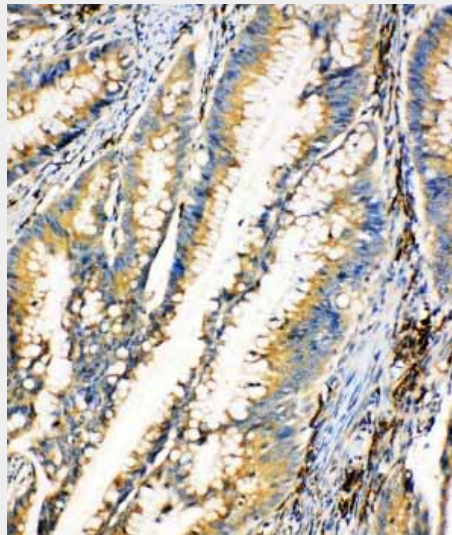
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-HEXA Antibody - Images





Anti-HEXA antibody, ABO11094, Western blotting All lanes: Anti HEXA (ABO11094) at 0.5ug/ml Lane 1: Rat Liver Tissue Lysate at 50ug Lane 2: HELA Whole Cell Lysate at 40ug Lane 3: SMMC Whole Cell Lysate at 40ug Predicted bind size: 61KD Observed bind size: 61KD



Anti-HEXA antibody, ABO11094, IHC(P) IHC(P): Human Intestinal Cancer Tissue

### Anti-HEXA Antibody - Background

HEXA (hexosaminidase A (alpha polypeptide)) is an enzyme that in humans is encoded by the HEXA gene. Hexosaminidase A and the cofactor GM2 activator protein catalyze the degradation of the GM2 gangliosides and other molecules containing terminal N-acetyl hexosamines. The HEXA gene encodes the alpha subunit of hexosaminidase A, a lysosomal enzyme involved in the breakdown of gangliosides. The HEXA gene is mapped on 15q23. Even though the alpha and beta subunits of hexosaminidase A can both cleave GalNAc residues, only the alpha subunit is able to hydrolyze GM2 gangliosides. The alpha subunit contains a key residue, Arg-424, which is essential for binding the N-acetyl-neuramonic residue of GM2 gangliosides. Chimeric constructs were expressed in HeLa cells and selected constructs were produced in the baculovirus expression system to determine their ability to degrade GM2 ganglioside in the presence of GM2 activator protein. Their results allowed them to define 2 noncontiguous sequences in the alpha subunit (amino acids 1-191 and 403-529) which, when substituted into analogous positions in the beta subunit, conferred activity against the sulfated substrate.