

Product datasheet

Anti-HEXB antibody [EPR7978] ab140649

KO VALIDATED Recombinant RabMAb[®]

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Overview

Product name	Anti-HEXB antibody [EPR7978]
Description	Rabbit monoclonal [EPR7978] to HEXB
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P Unsuitable for: Flow Cyt, ICC/IF or IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide within Human HEXB aa 400-500. The exact sequence is proprietary.
Positive control	WB: Recombinant Human HEXB protein (ab114915) Jurkat, HeLa, HepG2 and Caco-2 cell lysates. IHC-P: Human kidney and lung tissue.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR7978

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab140649 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000 - 1/10000. Detects a band of approximately 29, 63 kDa (predicted molecular weight: 63 kDa).
IHC-P		1/25 - 1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. Antigen retrieval is recommended.

Application notes

Is unsuitable for Flow Cyt, ICC/IF or IP.

Target

Function

Responsible for the degradation of GM2 gangliosides, and a variety of other molecules containing terminal N-acetyl hexosamines, in the brain and other tissues.

Involvement in disease

Defects in HEXB are the cause of GM2-gangliosidosis type 2 (GM2G2) [MIM:268800]; also known as Sandhoff disease. GM2-gangliosidosis is an autosomal recessive lysosomal storage disease marked by the accumulation of GM2 gangliosides in the neuronal cells. GM2G2 is clinically indistinguishable from GM2-gangliosidosis type 1, presenting startle reactions, early blindness, progressive motor and mental deterioration, macrocephaly and cherry-red spots on the macula.

Sequence similarities

Belongs to the glycosyl hydrolase 20 family.

Post-translational modifications

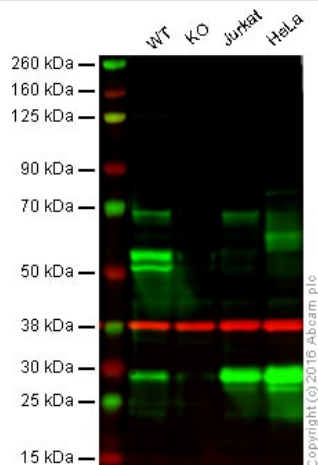
N-linked glycans at Asn-142 and Asn-190 consist of Man(3)-GlcNAc(2) and Man(5 to 7)-GlcNAc(2), respectively.

The beta-A and beta-B chains are produced by proteolytic processing of the precursor beta chain.

Cellular localization

Lysosome.

Images



Western blot - Anti-HEXB antibody [EPR7978]
(ab140649)

Lane 1: Wild type HAP1 whole cell lysate (20 µg)

Lane 2: HEXB knockout HAP1 whole cell lysate (20 µg)

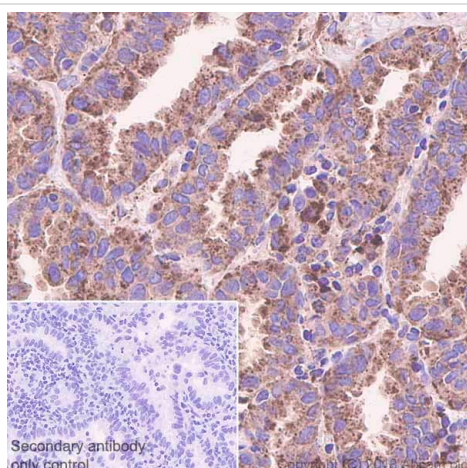
Lane 3: Jurkat whole cell lysate (20 µg)

Lane 4: HeLa whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab140649 observed at 70 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

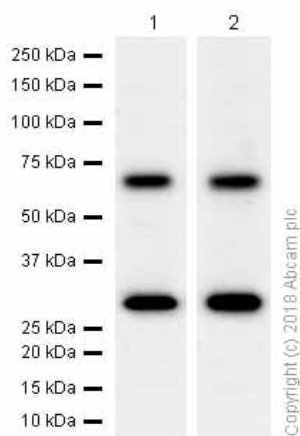
ab140649 was shown to specifically react with HEXB when HEXB knockout samples were used. Wild-type and HEXB knockout samples were subjected to SDS-PAGE. Ab140649 and **ab8245** (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) **ab216773** and 680CW Goat anti Mouse secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.

This image was generated using the unpurified version of the product.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HEXB antibody [EPR7978] (ab140649)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human lung cancer tissue sections labeling HEXB with Purified ab140649 at 1:500 dilution (4.84 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-HEXB antibody [EPR7978] (ab140649)

All lanes : Anti-HEXB antibody [EPR7978] (ab140649) at 1/1000 dilution (Purified)

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

Lane 2 : HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysate

Lysates/proteins at 15 µg per lane.

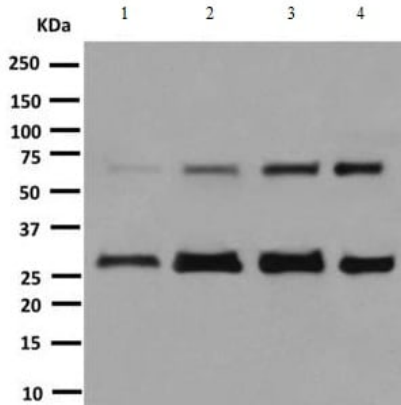
Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 63 kDa

Observed band size: 29,63 kDa

The double bands caused by proteolytic processing are consistent with what has been described in PMID 2139028



Western blot - Anti-HEXB antibody [EPR7978] (ab140649)

All lanes : Anti-HEXB antibody [EPR7978] (ab140649) at 1/1000 dilution

Lane 1 : Jurkat cell lysate

Lane 2 : HeLa cell lysate

Lane 3 : HepG2 cell lysate

Lane 4 : Caco-2 cell lysate

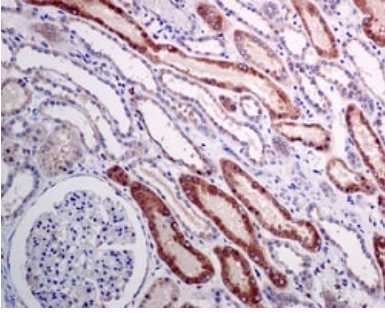
Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP conjugated goat anti-rabbit at 1/2000 dilution

Predicted band size: 63 kDa

This image was generated using the unpurified version of the product.



Immunohistochemical analysis of paraffin embedded Human kidney tissue labelling HEXB with ab140649 at a 1/25 dilution.

This image was generated using the unpurified version of the product.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HEXB antibody [EPR7978] (ab140649)

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-HEXB antibody [EPR7978] (ab140649)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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