

Product datasheet

Anti-BACE1 antibody [EPR22802-233] ab263901

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-BACE1 antibody [EPR22802-233]
Description	Rabbit monoclonal [EPR22802-233] to BACE1
Host species	Rabbit
Specificity	This antibody is not recommended for human IHC-P
Tested applications	Suitable for: WB, IHC-P Unsuitable for: Flow Cyt, ICC/IF or IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: His-tagged human BACE1 recombinant protein; Wild-type HAP1 and SH-SY5Y whole cell lysates; Mouse brain, Human brain and Rat hippocampus lysates. IHC-P: Mouse hippocampus and Rat hippocampus tissues.
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>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 0.05% BSA, 40% Glycerol (glycerin, glycerine)
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EPR22802-233
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab263901 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

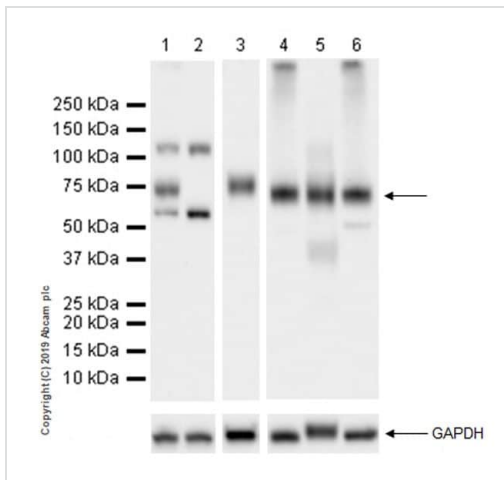
Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 70 kDa (predicted molecular weight: 56 kDa).
IHC-P		1/4000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. This antibody is not recommended for human IHC-P

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

Target

Function	Responsible for the proteolytic processing of the amyloid precursor protein (APP). Cleaves at the N-terminus of the A-beta peptide sequence, between residues 671 and 672 of APP, leads to the generation and extracellular release of beta-cleaved soluble APP, and a corresponding cell-associated C-terminal fragment which is later released by gamma-secretase.
Tissue specificity	Expressed at high levels in the brain and pancreas. In the brain, expression is highest in the substantia nigra, locus coeruleus and medulla oblongata.
Sequence similarities	Belongs to the peptidase A1 family.
Domain	The transmembrane domain is necessary for its activity. It determines its late Golgi localization and access to its substrate, APP.
Post-translational modifications	Glycosylated.
Cellular localization	Membrane. Golgi apparatus > trans-Golgi network. Endoplasmic reticulum. Endosome. Cell surface. Predominantly localized to the later Golgi/trans-Golgi network (TGN) and minimally detectable in the early Golgi compartments. A small portion is also found in the endoplasmic reticulum, endosomes and on the cell surface.

Images



Western blot - Anti-BACE1 antibody [EPR22802-233] (ab263901)

All lanes : Anti-BACE1 antibody [EPR22802-233] (ab263901) at 1/1000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : BACE1 knockout HAP1 whole cell lysate

Lane 3 : SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate

Lane 4 : Mouse brain lysate

Lane 5 : Human brain lysate

Lane 6 : Rat hippocampus lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 56 kDa

Observed band size: 70 kDa

Blocking and dilution buffer: 5% NFDm/TBST.

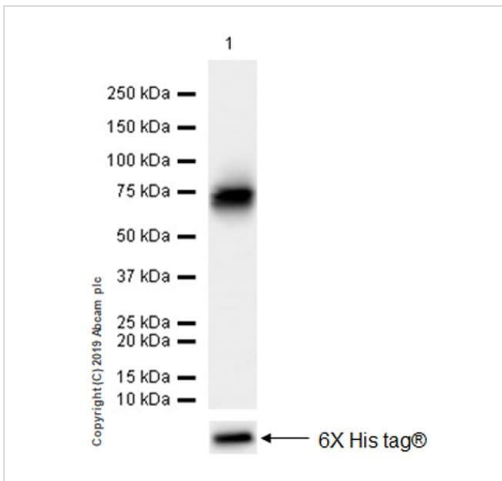
Exposure times.

Lanes 1-2:26 seconds;

Lanes 3-6:10 seconds.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 17425515).

ab263901 was shown to specifically react with BACE1 in wild-type HAP1 cells as signal was lost in BACE1 knockout cells. Wild-type and BACE1 knockout samples were subjected to SDS-PAGE. ab263901 and [ab181602](#) (Rabbit anti-GAPDH loading control) were incubated 1 hour at room temperature at 1/1000 dilution and 1/200,000 dilution respectively. Blots were developed with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated ([ab97051](#)) secondary antibody at 1/100,000 dilution for 1 hour at room temperature before imaging. The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument using the ECL technique.



Western blot - Anti-BACE1 antibody [EPR22802-233] (ab263901)

Anti-BACE1 antibody [EPR22802-233] (ab263901) at 1/1000 dilution + His-tagged human BACE1 recombinant protein (aa22-460 & aa46-460), 10 ng

Secondary

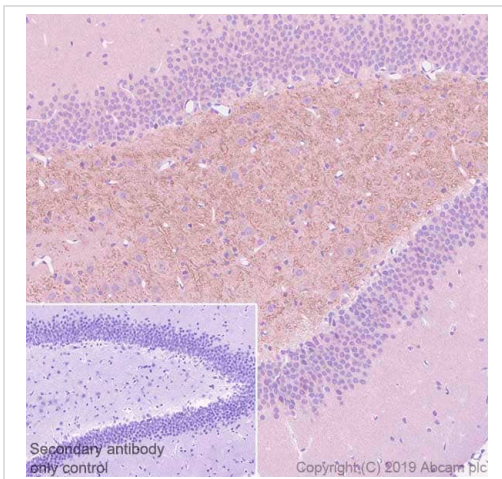
Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 56 kDa

Observed band size: 65-67,68-70 kDa

Blocking and dilution buffer: 5% NFD/MTBST.

Exposure time: 3 seconds.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BACE1 antibody [EPR22802-233] (ab263901)

Immunohistochemical analysis of paraffin-embedded Rat hippocampus tissue labeling BACE1 with ab263901 at 1/4000 dilution (0.19 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)). Positive staining on mossy fibers in the hilar region of the dentate gyrus. The section was incubated with ab263901 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins.







Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BACE1 antibody [EPR22802-233] (ab263901)

Immunohistochemical analysis of paraffin-embedded Mouse hippocampus tissue labeling BACE1 with ab263901 at 1/4000 dilution (0.19 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on mossy fibers in the hilar region of the dentate gyrus. The section was incubated with ab263901 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**)..

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins.

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-BACE1 antibody [EPR22802-233] (ab263901)

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

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