abcam

Product datasheet

Anti-BACE1 antibody ab2077

★★★★☆ **4 Abreviews**   **86 References**   6 Images

Overview

Product name	Anti-BACE1 antibody
Description	Rabbit polyclonal to BACE1
Host species	Rabbit
Tested applications	**Suitable for:** WB, ICC, IHC-P
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide corresponding to Human BACE1 (C terminal). The immunogen is located within the last 50 amino acids of BACE1 and it consists of a 17 aa peptide. Database link: **P56817** (Peptide available as **ab7883**)
Positive control	WB: Human A431, A549, Caco-2, Daudi, HeLa, K562, Jurkat, SK-N-SH, THP-1 and brain tissue lysates. Mouse: 3T3/NIH cell lysate. IHC-P: Mouse brain tissue. ICC: Mouse 3T3 cells.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

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. Avoid freeze / thaw cycle. Stable for 12 months at -20°C.
Storage buffer	pH: 7.2 Preservative: 0.02% Sodium azide
Purity	Affinity purified
Primary antibody notes	Beta-site APP Cleaving Enzyme.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee   Our **Abpromise guarantee** covers the use of ab2077 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	★★★★☆ (2)	Use a concentration of 1 µg/ml. Detects a band of approximately 70 kDa. We recommend overnight incubation at 4C and using 5% skim milk to block.
ICC		Use a concentration of 10 µg/ml.
IHC-P		Use a concentration of 2.5 µg/ml.

Target

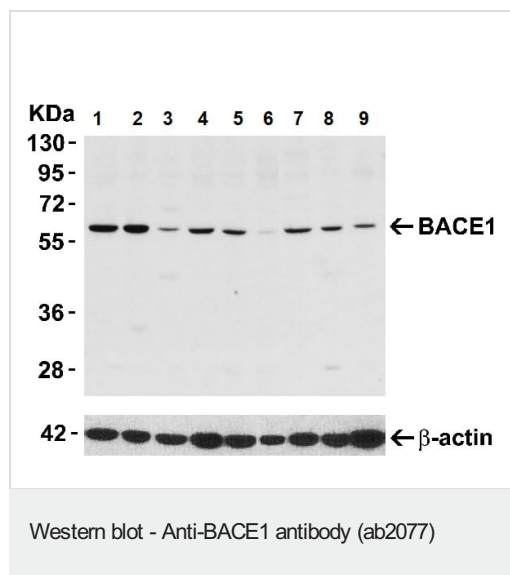|	
Function	Responsible for the proteolytic processing of the amyloid precursor protein (APP). Cleaves at the N-terminus of the A-beta peptide sequence, between residues 671 and 672 of APP, leads to the generation and extracellular release of beta-cleaved soluble APP, and a corresponding cell-associated 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 coruleus 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 (ab2077)

All lanes :

Lane 1 : A431 (Human epidermoid carcinoma cell line) whole cell lysate with Anti-BACE1 antibody (ab2077)

Lane 2 : A549 (Human lung carcinoma cell line) whole cell lysate with Anti-BACE1 antibody (ab2077)

Lane 3 : Caco-2 (Human colorectal adenocarcinoma cell line) whole cell lysate with Anti-BACE1 antibody (ab2077)

Lane 4 : Daudi (Human Burkitt's lymphoma cell line) whole cell lysate with Anti-BACE1 antibody (ab2077)

Lane 5 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate with Anti-BACE1 antibody (ab2077)

Lane 6 : K562 (Human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate with Anti-BACE1 antibody (ab2077)

Lane 7 : Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate with Anti-BACE1 antibody (ab2077)

Lane 8 : SK-N-SH (Human neuroblastoma cell line) whole cell lysate with Anti-BACE1 antibody (ab2077)

Lane 9 : THP-1 (Human monocytic leukemia cell line) whole cell lysate with Anti-BACE1 antibody (ab2077)

Lysates/proteins at 15 µg per lane.

Blocking peptides at 1 µg/ml per lane.

Secondary
All lanes : Rabbit IgG antibody (HRP) at 1/10000 dilution

Developed using the ECL technique.

Additional bands at: 65 kDa (possible glycosylated form)

10% gel.

Running conditions: 130v for 2 hours.

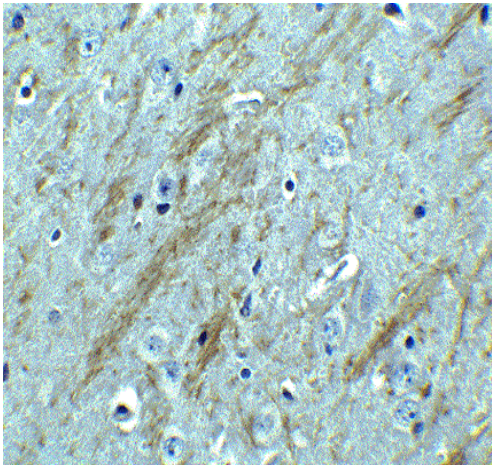Transfer conditions: wet, 250mA, 2 hrs (Nitrocellulose membrane).

Blocking condition: 5% non-fat dry milk in TBS, 4C, overnight.

Primary antibody incubation: Room temperature for 1 hour.

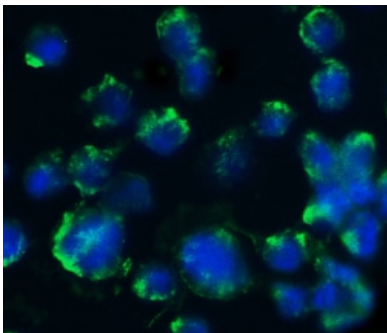Secondary antibody incubation: Room temperature for 1 hour.

Washing conditions: 15 mL TSBT, 3 x 10 minutes.
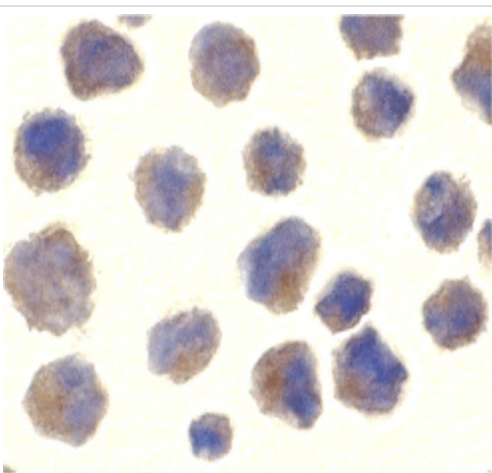
Exposure: ECL solution

Immunohistochemical analysis of paraffin-embedded mouse brain tissue using ab2077 at 2.5 µg/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.
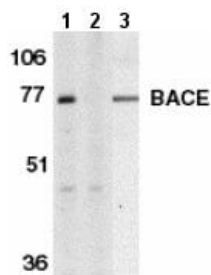
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BACE1 antibody (ab2077)

Immunocytochemical analysis of 4% paraformaldehyde-fixed NIH/3T3 (Mouse embryo fibroblast cell line) cells labeling BACE1 with ab2077 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue). Image showing both membrane and cytosol staining on NIH/3T3 cells.

Immunocytochemistry - Anti-BACE1 antibody (ab2077)

Immunocytochemical analysis of NIH/3T3 (Mouse embryo fibroblast cell line) cells labeling BACE1 with ab2077 at 10 µg/mL. Cells were fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.

Immunocytochemistry - Anti-BACE1 antibody (ab2077)

Western blot - Anti-BACE1 antibody (ab2077)

All lanes : Anti-BACE1 antibody (ab2077) at 1 µg/ml

Lane 1 : Human brain tissue lysate with absence of blocking peptide

Lane 2 : Human brain tissue lysate with BACE1 peptide (**ab7883**)
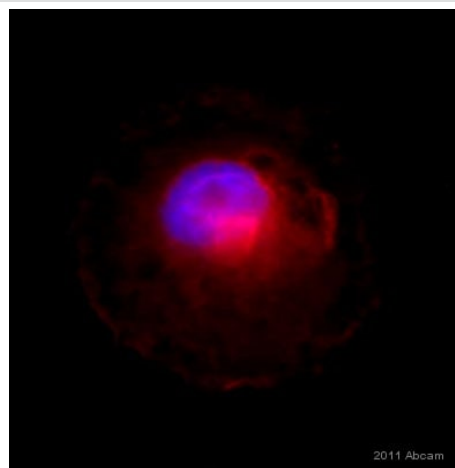
Lane 3 : Mouse 3T3/NIH cell lysate

Lysates/proteins at 15 µg per lane.

Secondary

All lanes : Goat anti-rabbit IgG HRP conjugate at 1/10000 dilution

Observed band size: 70 kDa

Incubate the antibody for 1 hour at room temperature in 5% NFDM/TBST.

Immunocytochemistry - Anti-BACE1 antibody (ab2077)

Image courtesy of an anonymous Abreview.

Immunocytochemical analysis of D54MG (human glioblastoma cell line) cells labeling BACE1 with ab2077.Cells were fixed in paraformaldehyde, permeabilized with 0.1% Triton X-100, blocked with 0.5% BSA for 20 minutes at room temperature, then incubated with ab2077 at a 1/50 dilution for 16 hours at 4°C. The secondary used was a TRITC conjugated goat anti-rabbit polyclonal, used at a 1/400 dilution. Nuclei are counterstained with DAPI.

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