

Rabbit BACE Polyclonal Antibody | anti-BACE antibody

Phospho-BACE (Ser498) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329614	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Zebrafish (80%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (90%)	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

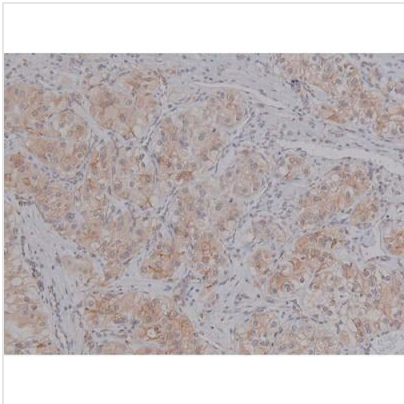
BACE; Polyclonal Antibody; Phospho-BACE (Ser498) Antibody; APP beta secretase; Asp 2; ASP2; Aspartyl protease 2; BACE 1; BACE1; BACE1_HUMAN; Beta secretase 1; Beta secretase; Beta site amyloid beta A4 precursor protein cleaving enzyme; Beta site amyloid precursor protein cleaving enzyme 1; Beta site amyloid precursor protein cleaving enzyme; Beta site APP cleaving enzyme 1; Beta site APP cleaving enzyme; Beta-secretase 1; Beta-site amyloid precursor protein cleaving enzyme 1; Beta-site APP cleaving enzyme 1; FLJ90568; HSPC104; Memapsin 2; Memapsin-2; Memapsin2; Membrane associated aspartic protease 2; Membrane-associated aspartic protease 2; Transmembrane aspartic proteinase Asp2; anti-BACE antibody

PRODUCT SPECIFICATIONS

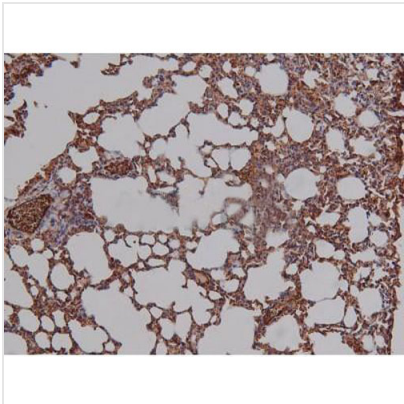
Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Zebrafish (80%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (90%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-BACE (Ser498) Antibody detects endogenous levels of BACE only when phosphorylated at Ser498. 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.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-BACE antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human BACE around the phosphorylation site of Ser498.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	N-Glycosylated. Addition of a bisecting N-acetylglucosamine by MGAT3 blocks lysosomal targeting, further degradation and is required for maintaining stability under stress conditions (By similarity). Acetylated in the endoplasmic reticulum at Lys-126, Lys-275, Lys-279, Lys-285, Lys-299, Lys-300 and Lys-307. Acetylation by NAT8 and NAT8B is transient and deacetylation probably occurs in the Golgi. Acetylation regulates the maturation, the transport to the plasma membrane, the stability and the expression of the protein. Palmitoylation mediates lipid raft localization. Ubiquitinated at Lys-501, ubiquitination leads to lysosomal degradation. Monoubiquitinated and 'Lys-63'-linked polyubiquitinated. Deubiquitinated by USP8; inhibits lysosomal degradation. Phosphorylation at Ser-498 is required for interaction with GGA1 and retrograded transport from endosomal compartments to the trans-Golgi network. Non-phosphorylated BACE1 enters a direct recycling route to the cell surface.

Subunit Structure	Monomer. Interacts (via DXXLL motif) with GGA1, GGA2 and GGA3 (via their VHS domain); the interaction highly increases when BACE1 is phosphorylated at Ser-498. Interacts with RTN3 and RTN4. Interacts with SNX6. Interacts with PCSK9. Interacts with NAT8 and NAT8B. Interacts with BIN1. Interacts (via extracellular domain) with ADAM10 (via extracellular domain) (By similarity). Interacts with SORL1; this interaction may affect binding with APP and hence reduce APP cleavage.
Similarity	DXXLL motif is required for a proper endocytosis and retrograde transport to the trans-Golgi network, as well as for regulation of lysosomal degradation.The transmembrane domain is necessary for its activity. It determines its late Golgi localization and access to its substrate, APP.Belongs to the peptidase A1 family.
Subcellular Location	Cell membrane>Single-pass type I membrane protein. Golgi apparatus>trans-Golgi network. Endoplasmic reticulum. Endosome. Cell surface. Cytoplasmic vesicle membrane>Single-pass type I membrane protein. Membrane raft. Lysosome. Late endosome. Early endosome. Recycling endosome. Cell projection>Axon. Cell projection>Dendrite. Note: 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 (PubMed:17425515, PubMed:11466313). Colocalization with APP in early endosomes is due to addition of bisecting N-acetylglucosamine wich blocks targeting to late endosomes and lysosomes (By similarity). Retrogradly transported from endosomal compartments to the trans-Golgi network in a phosphorylation- and GGA1- dependent manner (PubMed:15886016).
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

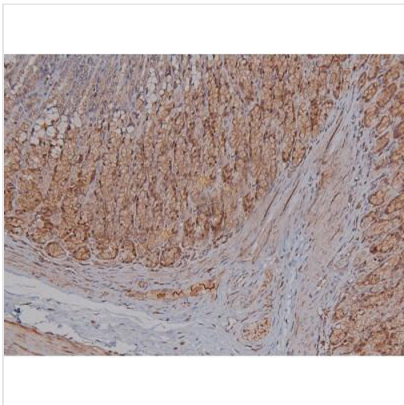
IMAGES



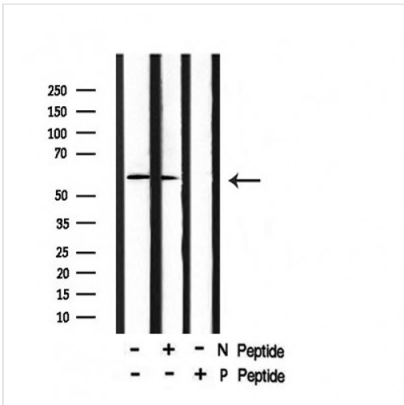
IHC (Immunohistochemistry)
At 1/200 staining Human liver cancer tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemisry)
At 1/200 staining Mouse lung tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohiostchemistry)
Staining Rat ganstric tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of BACE (Phospho-Ser498) using HeLa whole cell lysates.-/+ means absence or presence of N peptide¼non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-BACE antibody	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. Cleaves CHL1 (By similarity). DYKDDDDK tag Mouse mAb is part of the series of Tag antibodies, the excellent quality in the research. DYKDDDDK tag antibody is a highly sensitive and affinity PAB applicable to DYKDDDDK-tagged fusion protein detection. DYKDDDDK tag antibody can detect DYKDDDDK tags in internal, C-terminal, or N-terminal recombinant proteins.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	333440466
NCBI GeneID	23621
NCBI Accession #	NP_001193977.1
NCBI GenBank Nucleotide #	NM_001207048.1
UniProt Accession #	P56817; Q9BYB9; Q9BYC0; Q9BYC1; Q9UJT5; Q9ULS1; A0M8W7; B0YIU9; E9PE65; H7BXJ9
Molecular Weight	55,711 Da
NCBI Official Full Name	beta-secretase 1 isoform E
NCBI Official Synonym Full Names	beta-site APP-cleaving enzyme 1
NCBI Official Symbol	BACE1
NCBI Official Synonym Symbols	ASP2; BACE; HSPC104
NCBI Protein Information	beta-secretase 1; asp 2; memapsin-2; APP beta-secretase; aspartyl protease 2; beta-site APP cleaving enzyme 1; beta-secretase 1 precursor variant 1; transmembrane aspartic proteinase Asp2; membrane-associated aspartic protease 2; beta-site amyloid beta A4
UniProt Protein Name	Beta-secretase 1
UniProt Gene Name	BACE1
UniProt Synonym Gene Names	BACE; KIAA1149; ASP2; Asp 2
UniProt Entry Name	BACE1_HUMAN

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/polyclonal/bace-antibody-peptide-elisa-immunohistochemistry-western-blot-elisa/329614>