

**Phospho-BACE(S498) Antibody**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP3032a**

**Specification**

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**Phospho-BACE(S498) Antibody - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">P56817</a>
Other Accession	<a href="#">P56819</a> , <a href="#">P56818</a> , <a href="#">Q2HJ40</a>
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG

**Phospho-BACE(S498) Antibody - Additional Information**

**Gene ID** 23621

**Other Names**

Beta-secretase 1, Aspartyl protease 2, ASP2, Asp 2, Beta-site amyloid precursor protein cleaving enzyme 1, Beta-site APP cleaving enzyme 1, Memapsin-2, Membrane-associated aspartic protease 2, BACE1, BACE, KIAA1149

**Target/Specificity**

This BACE Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S498 of human BACE.

**Dilution**

WB~~1:1000  
IHC-P~~1:50~100  
E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Phospho-BACE(S498) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Phospho-BACE(S498) Antibody - Protein Information**

**Name** BACE1 ([HGNC:933](#))

**Synonyms** BACE, KIAA1149

**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 (PubMed:[10656250](#), PubMed:[10677483](#), PubMed:[20354142](#)). Cleaves CHL1 (By similarity).

**Cellular 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 {ECO:0000250|UniProtKB:P56818}. Lysosome. Late endosome. Early endosome. Recycling endosome. Cell projection, axon {ECO:0000250|UniProtKB:P56818}. Cell projection, dendrite {ECO:0000250|UniProtKB:P56818}. 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:11466313, PubMed:17425515). Colocalization with APP in early endosomes is due to addition of bisecting N-acetylglucosamine which 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). {ECO:0000250|UniProtKB:P56818, ECO:0000269|PubMed:11466313, ECO:0000269|PubMed:15886016, ECO:0000269|PubMed:17425515}

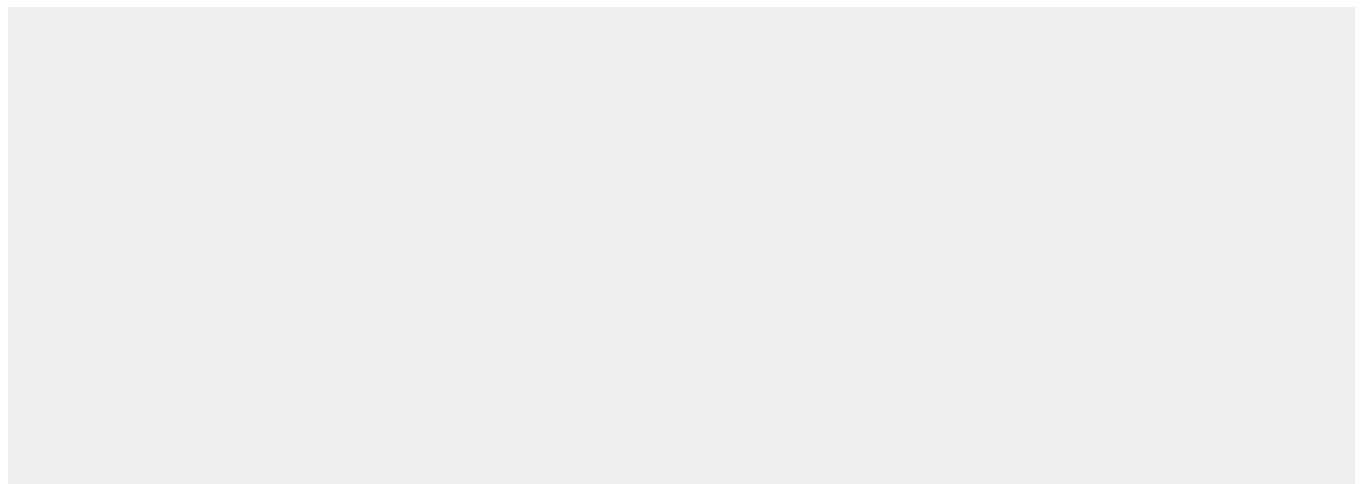
**Tissue Location**

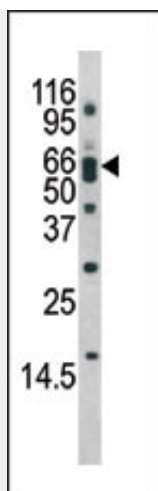
Expressed at high levels in the brain and pancreas. In the brain, expression is highest in the substantia nigra, locus coeruleus and medulla oblongata.

**Phospho-BACE(S498) Antibody - Protocols**

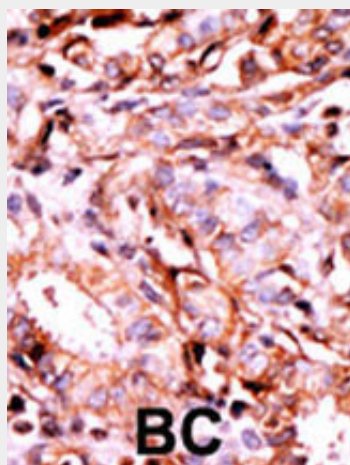
Provided below are standard protocols that you may find useful for product applications.

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

**Phospho-BACE(S498) Antibody - Images**



The anti-Phospho-BACE-S498 Pab (Cat. #AP3032a) is used in Western blot to detect Phospho-BACE-S498 in mouse brain tissue lysate



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

#### **Phospho-BACE(S498) Antibody - Background**

Cerebral deposition of amyloid beta peptide is an early and critical feature of Alzheimer's disease. Amyloid beta peptide is generated by proteolytic cleavage of amyloid precursor protein (APP) by two proteases, one of which is BACE. The encoded protein, a member of the peptidase A1 protein family, is a type I integral membrane glycoprotein and aspartic protease that is found mainly in the Golgi.

#### **Phospho-BACE(S498) Antibody - References**

- Xie, J., et al., J. Biol. Chem. 280(14):13824-13832 (2005).
- He, X., et al., J. Biol. Chem. 280(12):11696-11703 (2005).
- Huang, X.P., et al., J. Biol. Chem. 279(36):37886-37894 (2004).
- Chiocco, M.J., et al., J. Biol. Chem. 279(50):52535-52542 (2004).
- Yang, H.C., et al., J. Neurochem. 91(6):1249-1259 (2004).