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BACE2 Rabbit pAb

Catalog # AP98897

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q9Y5Z0
Other Accession	Q9Y5Z0
Predicted	Rat, Pig, Human, Mouse, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	56180
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human BACE2
Epitope Specificity	101-200/518
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the peptidase A1 family.
SUBUNIT	Monomer. Interacts ith RTN3 and RTN4.
Post-translational modifications	Undergoes autoproteolytic cleavage. Glycosylated.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Cerebral deposition of amyloid beta peptide is an early and critical feature of Alzheimer's disease and a frequent complication of Down syndrome. Amyloid beta peptide is generated by proteolytic cleavage of amyloid precursor protein by 2 proteases, one of which is the protein encoded by this gene. This gene localizes to the 'Down critical region' of chromosome 21. The encoded protein, a member of the peptidase A1 protein family, is a type I integral membrane glycoprotein and aspartic protease. Three transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Jul 2008].

Additional Information

Gene ID	25825
Other Names	AEPLC; ALP56; ASP1; ASP21; BAE2; CDA13; CEAP1; DRAP; 1110059C24Rik; ARP1; BACE2_HUMAN; BACE2; Aspartic-like protease 56 kDa; Aspartyl protease 1 (ASP1 | Asp 1); Beta-site amyloid precursor protein cleaving enzyme 2 (Beta-site APP cleaving enzyme 2); Down region aspartic protease (DRAP); Memapsin-1; Membrane-associated aspartic protease 1; Theta-secretase; 3.4.23.45; BACE2_MOUSE; BACE2_RAT; beta-secretase 2; beta-site APP-cleaving enzyme 2; memapsin 1; aspartyl protease 1; 56 kDa aspartic-like protease; Down region aspartic protease

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	BACE2
Synonyms	AEPLC, ALP56, ASP21
Function	Responsible for the proteolytic processing of the amyloid precursor protein (APP). Cleaves APP, between residues 690 and 691, leading 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. It has also been shown that it can cleave APP between residues 671 and 672 (PubMed:10591213, PubMed:11083922, PubMed:11423558, PubMed:15857888, PubMed:16816112). Involved in the proteolytic shedding of PMEL at early stages of melanosome biogenesis. Cleaves PMEL within the M-beta fragment to release the amyloidogenic PMEL luminal fragment containing M-alpha and a small portion of M-beta N-terminus. This is a prerequisite step for subsequent processing and assembly of PMEL fibrils into amyloid sheets (PubMed:23754390). Responsible also for the proteolytic processing of CLTRN in pancreatic beta cells (PubMed:21907142).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Golgi apparatus. Endoplasmic reticulum. Endosome Melanosome. Note=Colocalizes with PMEL in stage I and II melanosomes.
Tissue Location	Brain. Present in neurons within the hippocampus, frontal cortex and temporal cortex (at protein level). Expressed at low levels in most peripheral tissues and at higher levels in colon, kidney, pancreas, placenta, prostate, stomach and trachea. Expressed at low levels in the brain. Found in spinal cord, medulla oblongata, substantia nigra and locus coruleus. Expressed in the ductal epithelium of both normal and malignant prostate.

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