

# BACE2 Rabbit pAb

Catalog # AP98960

## Product Information

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| <b>Application</b>                      | IHC-P, IHC-F, IF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Primary Accession</b>                | <a href="#">Q9Y5Z0</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Other Accession</b>                  | <a href="#">Q9Y5Z0</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Host</b>                             | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Clonality</b>                        | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Calculated MW</b>                    | 56180                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Physical State</b>                   | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Immunogen</b>                        | KLH conjugated synthetic peptide derived from human BACE2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Epitope Specificity</b>              | 101-200/518                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Isotype</b>                          | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Purity</b>                           | affinity purified by Protein A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Buffer</b>                           | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>SIMILARITY</b>                       | Belongs to the peptidase A1 family.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SUBUNIT</b>                          | Monomer. Interacts ith RTN3 and RTN4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Post-translational modifications</b> | Undergoes autoproteolytic cleavage. Glycosylated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Important Note</b>                   | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Background Descriptions</b>          | 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

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| <b>Gene ID</b>     | 25825                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Other Names</b> | 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 |
| <b>Dilution</b>    | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <b>Storage</b> | 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. |
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## Protein Information

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| <b>Name</b>              | BACE2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Synonyms</b>          | AEPLC, ALP56, ASP21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Function</b>          | 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: <a href="#">10591213</a> , PubMed: <a href="#">11083922</a> , PubMed: <a href="#">11423558</a> , PubMed: <a href="#">15857888</a> , PubMed: <a href="#">16816112</a> ). 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: <a href="#">23754390</a> ). Responsible also for the proteolytic processing of CLTRN in pancreatic beta cells (PubMed: <a href="#">21907142</a> ). |
| <b>Cellular Location</b> | Cell membrane; Single-pass type I membrane protein. Golgi apparatus. Endoplasmic reticulum. Endosome Melanosome. Note=Colocalizes with PMEL in stage I and II melanosomes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Tissue Location</b>   | 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 coeruleus. Expressed in the ductal epithelium of both normal and malignant prostate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.