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#5606

BACE1 (D10E5) Rabbit mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP, IF-F, IF-IC	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 70	Source/Isotype: Rabbit IgG	UniProt ID: #P56817	Entrez-Gene Id: 23621
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Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Frozen)
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:50
1:50 - 1:200
1:200 - 1:800

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier-free (BSA and azide free) version of this product see product #20562.

Specificity/Sensitivity

BACE1 (D10E5) Rabbit mAb detects endogenous levels of total BACE1 protein. This product does not detect BACE2.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding His490 of human BACE1 protein.

Background

β-secretase (BACE) is an aspartic acid proteinase that catalyzes the initial step in APP processing by cleaving and releasing a soluble, extracellular APP-β (sAPPβ) ectodomain and generating a membrane-bound, carboxy-terminal fragment consisting of 99 amino acids (CTF99). Additional processing of CTF99 by γ-secretase generates the amyloid β-peptide (Aβ) that forms aggregates in the brains of Alzheimer disease (AD) patients. BACE is an attractive target for inhibitors in AD therapy since it catalyzes the first and rate limiting step in amyloidogenic APP processing (1). Pro-BACE-1 is synthesized in the ER before it is transported to the trans-Golgi network to undergo maturation (2). BACE-1 functions as a dimer and is phosphorylated at Ser498 by casein kinase 1, which is necessary for recycling back to the membrane from the early endosome (3,4).

Background References

- Hunt, C.E. and Turner, A.J. (2009) *FEBS J* 276, 1845-59.
- Benjannet, S. et al. (2001) *J Biol Chem* 276, 10879-87.
- Walter, J. et al. (2001) *J Biol Chem* 276, 14634-41.
- He, X. et al. (2005) *J Biol Chem* 280, 11696-703.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-F:** Immunofluorescence (Frozen) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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