Revision 5

Store at -20C

#32098

β-Amyloid (1-43) (E8C2D) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IF-F	H	Endogenous	6	Rabbit IgG	#P05067	351

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Frozen)	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 #29691.

Specificity/Sensitivity

β-Amyloid (1-43) (E8C2D) Rabbit mAb recognizes endogenous levels of total human Aβ-43 protein. This product detects transgenically expressed human APP in mouse models. This antibody weakly cross-reacts with human Aβ-42 protein.

Species predicted to react based on 100% sequence homology

Mouse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy of human β-Amyloid (1-43) protein.

Background

Amyloid β (Aβ) precursor protein (APP) is a 100-140 kDa transmembrane glycoprotein that exists as several isoforms (1). The amino acid sequence of APP contains the amyloid domain, which can be released by a two-step proteolytic cleavage (1). The extracellular deposition and accumulation of the released Aβ fragments form the main components of amyloid plaques in Alzheimer's disease (1). APP can be phosphorylated at several sites, which may affect the proteolytic processing and secretion of this protein (2-5). Phosphorylation at Thr668 (a position corresponding to the APP695 isoform) by cyclin-dependent kinase is cell-cycle dependent and peaks during G2/M phase (4). APP phosphorylated at Thr668 exists in adult rat brain and correlates with cultured neuronal differentiation (5,6).
Aβ43 has been suggested as a biomarker in early onset of Alzheimer's disease, where patients have lower levels of Aβ43 in cerebrospinal fluid (7,8,9). Several studies have shown that Aβ toxicity of Aβ43 is as high as Aβ42 or Aβ40 in different models of Alzheimer's disease, including mouse models and human disease. (10).

Background References

1. Selkoe, D.J. (1996) *J Biol Chem* 271, 18295-8.
2. Caporaso, G.L. et al. (1992) *Proc Natl Acad Sci USA* 89, 3055-9.
3. Hung, A.Y. and Selkoe, D.J. (1994) *EMBO J* 13, 534-42.
4. Suzuki, T. et al. (1994) *EMBO J* 13, 1114-22.
5. Ando, K. et al. (1999) *J Neurosci* 19, 4421-7.
6. Iijima, K. et al. (2000) *J Neurochem* 75, 1085-91.
7. Lauridsen, C. et al. (2017) *Front Aging Neurosci* 9, 210.
8. Almdahl, I.S. et al. (2017) *Front Aging Neurosci* 9, 9.
9. Pachahara, S.K. et al. (2015) *PLoS One* 10, e0136567.
10. Trambauer, J. et al. (2017) *Methods Enzymol* 584, 157-183.

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 **IF-F:** Immunofluorescence (Frozen)

Cross-Reactivity Key

H: Human

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