

Purified anti- β -Amyloid, 1-15 Antibody

Catalog# / Size	847501 / 25 μ g 847502 / 100 μ g
Clone	3A1
Regulatory Status	RUO
Other Names	AAA, ABETA, ABPP, AD1, CTFgamma, CVAP, PN-II, PN2, Amyloid beta A4 protein, preA4, protease nexin-II, peptidase nexin-II, beta-amyloid peptide, alzheimer disease amyloid protein, cerebral vascular amyloid peptide, APP, Amyloid Precursor Protein
Isotype	Mouse IgG1, κ
Description	Alzheimer's disease is characterized by the accumulation of aggregated A β peptides in senile plaques and vascular deposits. A β peptides are derived from amyloid precursor protein (APP) through sequential proteolytic cleavage of APP by β - and γ -secretases generating diverse A β species. A β can aggregate to form soluble oligomeric species and insoluble fibrillar or amorphous assemblies. Some forms of the aggregated peptides are toxic to neurons.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	This antibody was raised against dityrosine cross-linked human A β 1-40.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	IHC-F - Quality tested Direct ELISA - Verified IHC-P - Reported in the literature, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by immunohistochemical staining on frozen tissue sections. For immunohistochemistry, a concentration range of 1.0 - 5.0 μ g/ml is suggested. For ELISA applications, a concentration range of 0.01 - 1.0 μ g/mL is recommended. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Additional reported applications (for the relevant formats) include: formalin-fixed paraffin-embedded immunohistochemical staining (IHC-P).
Application References	1. Frost JL, <i>et al.</i> 2015. <i>Neurobiol Aging</i> . 36(12):3187 (IHC-P) 2. Lardenoije R, <i>et al.</i> 2018. <i>Mol. Cell. Neurosci.</i> 86:1-15. (IHC-P) PubMed
(PubMed link indicates BioLegend citation)	
RRID	AB_2728567 (BioLegend Cat. No. 847501) AB_2728568 (BioLegend Cat. No. 847502)

Antigen Details

Structure	A β denotes peptides of 36-43 amino acids generated from cleavage of APP by secretases. A β has an apparent molecular mass of about 4 kD.
Distribution	Tissue distribution: Primarily nervous system, but also adipose tissue, intestine, muscle.

Cellular distribution: Cytosol, endosomes, nucleus, plasma membrane, extracellular, and golgi apparatus.

Function	The normal function of A β is not well understood. Several potential physiological roles have been proposed, including: activation of kinase enzymes; protection against oxidative stress; regulation of cholesterol transport; transcription factor, and as an anti-microbial agent.
Interaction	Tau, Prion
Biology Area	Cell Biology, Neurodegeneration, Neuroscience, Protein Misfolding and Aggregation
Molecular Family	APP/ β -Amyloid
Antigen References	<ol style="list-style-type: none">1. Puig KL, <i>et al.</i> 2012. <i>Exp Gerontol.</i> 48(7): 608.2. Selkoe DJ, <i>et al.</i> 2016. <i>EMBO Mol Med.</i> 8(6):595.3. Walsh DM, <i>et a.</i> 2007. <i>J Neurochem.</i> 101(5):1172.
Gene ID	351

Related Protocols

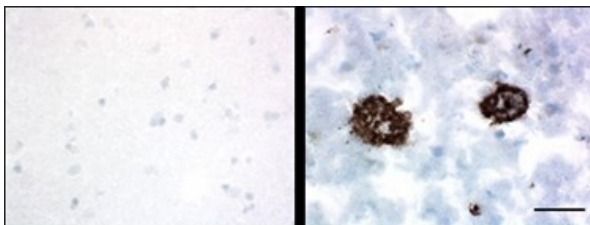
[Immunohistochemistry Protocol for Frozen Sections](#)

[Sandwich ELISA Protocol](#)

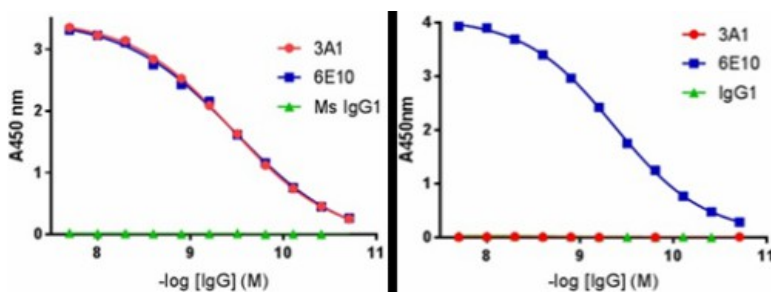
Other Formats

Purified anti- β -Amyloid, 1-15

Product Data



IHC staining of purified anti- β -Amyloid, 1-15 antibody (clone 3A1) on frozen normal (left panel) and Alzheimer's disease (right panel) human brain tissues. The tissues were incubated with 1 μ g/mL of the primary antibody overnight at 4°C. BioLegend's Ultra Streptavidin HRP Detection Kit (Cat. No. 929901) was used for detection followed by hematoxylin and bluing solution counterstaining, according to the protocol provided. The images were captured with a 40X objective. Scale bar: 50 μ m.



Direct ELISA of purified anti- β -Amyloid, 1-15 antibody (clone 3A1) binding to plate-immobilized A β 1-40 (left panel) and lack of reactivity with plate-immobilized recombinant APP (right panel). ELISA was performed by coating wells with 100 ng of peptide or protein. The wells were then incubated with clones 3A1, 6E10 or mouse IgG at 37°C for 45 minutes, followed by incubation with horseradish peroxidase labeled goat anti-mouse secondary antibody. Clone 6E10 was included as a control for cross-reactivity with A β 1-40 and APP. TMB (3, 3', 5, 5' tetramethylbenzidine, Cat. No. 421501) was used as the detection system.

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