

Purified anti- β -Amyloid, aggregated Antibody

Catalog# / Size	871201 / 25 μ g 871202 / 100 μ g
Clone	A18142A
Regulatory Status	RUO
Other Names	AAA, ABETA, ABPP, AD1, APPI, CTFgamma, CVAP, PN-II, PN2, Amyloid beta A4 protein, preA4, protease, peptidase nexin-II, beta-amyloid peptide, alzheimer disease amyloid protein, cerebral vascular amyloid peptide, APP, Amyloid Precursor Protein
Isotype	Mouse IgG2b, 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 proteins (APP) through sequential proteolytic cleavage of APP by β -secretases 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	Recombinant human amyloid beta (A β 1-40) protofibrils
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-P - Quality tested WB - Verified
Recommended Usage	Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration range of 1 - 10 μ g/mL is suggested. For western blotting, the suggested use of this reagent is 2 - 10 μ g/mL. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	This clone does not cross react with full length APP protein.
RRID	AB_2861107 (BioLegend Cat. No. 871201) AB_2861108 (BioLegend Cat. No. 871202)

Antigen Details

Structure	Amyloid precursor protein is a 770 amino acid protein with a molecular mass of ~100 kD. According to the UniProtKB database, APP (ID# P05067) has 11 isoforms (34 to ~90 kD) and the 770 form has been designated as the canonical form. Isoform APP695 is the predominant form expressed in neuronal tissue. Isoforms APP751 and APP770 are widely expressed in non-neuronal cells. Isoform APP751 is the most abundant form in T-lymphocytes. 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
Cell Type	Neurons
Biology Area	Cell Biology, Neurodegeneration, Neuroinflammation, Neuroscience, Protein Misfolding and Aggregation
Molecular Family	APP/ β -Amyloid
Antigen References	<ol style="list-style-type: none"> 1. Kumar A, <i>et al.</i> 2015. <i>Pharmacol. Rep.</i> 67(2):195. 2. Sadigh-Eteghad S, <i>et al.</i> 2015. <i>Med. Princ. Pract.</i> 24(1):1. 3. Hampel H, <i>et al.</i> 2015. <i>Expert Rev. Neurother.</i> 15(1):83. 4. Puig KL, <i>et al.</i> 2012. <i>Exp. Gerontol.</i> 48(7): 608. 5. Selkoe DJ, <i>et al.</i> 2016. <i>EMBO Mol. Med.</i> 8(6):595. 6. Walsh DM, <i>et al.</i> 2007. <i>J. Neurochem.</i> 101(5):1172.

Gene ID [351](#)

Related Protocols

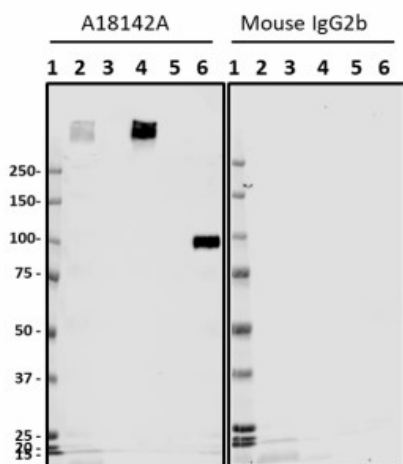
[Western Blotting Protocol](#)

[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

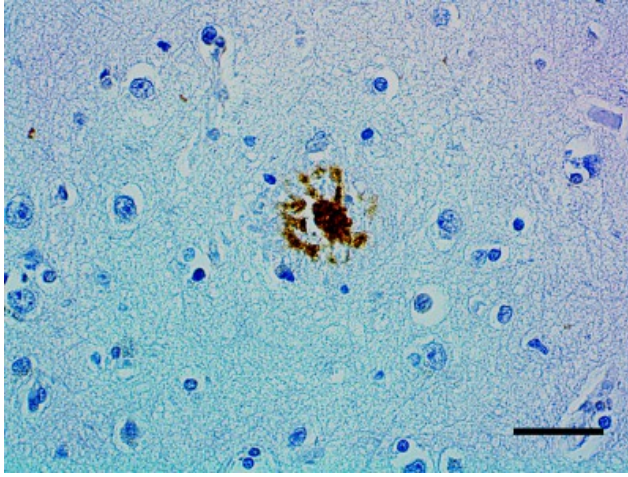
Other Formats

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Product Data



Western blot of purified anti- β -Amyloid, aggregated antibody (clone A18142A). Lane 1: Molecular weight marker; Lane 2: 20 μ g of Tris buffer (pH7.4) extract from Alzheimer's disease brain; Lane 3: 20 μ g of Tris buffer (pH7.4) extract from normal human brain; Lane 4: 20 μ g of Tris/2% SDS buffer extract from Alzheimer's disease brain; Lane 5: 20 μ g of Tris/2% SDS buffer extract from normal human brain; Lane 6: 100 ng APP751 recombinant protein. The blot was incubated with 2 μ g/mL of the primary antibody overnight at 4°C, followed by incubation with HRP goat anti-mouse IgG antibody (Cat. No. 405306). Enhanced chemiluminescence was used as the detection system.



IHC staining of purified anti- β -Amyloid, aggregated antibody (clone A18142A) on formalin-fixed paraffin-embedded Alzheimer's disease brain tissue. Following antigen retrieval using formic acid, the tissue was incubated with 1 μ g/mL of the primary antibody overnight at 4°C. BioLegend's Ultra Streptavidin (USA) HRP Detection Kit (Multi-Species, DAB, Cat. No. 929901) was used for detection followed by hematoxylin counterstaining, according to the protocol provided. The image was captured with a 40X objective. Scale bar: 50 μ m

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