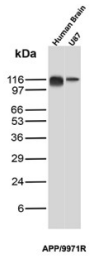
Amyloid A4 Antibody APP/9971R / A4 Monoclonal Antibody [clone APP/9971R] (V5746)

Catalog No.	Formulation	Size
V5746-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5746-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5746SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

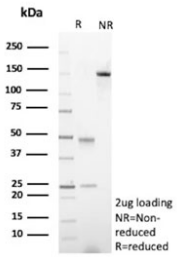
Recombinant RABBIT MONOCLONAL

Bulk quote request

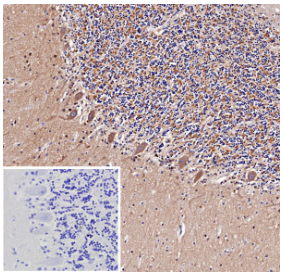
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	APP/9971R
Purity	Protein A affinity
UniProt	P05067
Localization	Membrane, cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml Western blot: 2-4ug/ml
Limitations	This Amyloid A4 Antibody APP/9971R / A4 Monoclonal Antibody is available for research use only.



Amyloid A4 Antibody APP/9971R in Human Brain and U-87 MG Lysates WB. Western blot testing of human brain and U-87 MG cell lysates with Amyloid A4 Antibody clone APP/9971R detects a prominent band at approximately 110-120 kDa in both samples, with minimal additional reactivity. The observed molecular weight is consistent with mature APP, which undergoes post-translational modification including glycosylation. The discrete high-molecular-weight signal demonstrates recognition by the A4 Antibody in human brain and cultured human cells.



Purified Amyloid A4 Antibody APP/9971R Reducing and Non-Reducing SDS-PAGE. SDS-PAGE analysis of purified, BSA-free Amyloid A4 Antibody clone APP/9971R shows prominent heavy and light antibody chains at approximately 50 and 25 kDa under reducing conditions. Under non-reducing conditions, the predominant intact antibody species migrates at approximately 150 kDa, with little additional protein staining visible. The gel demonstrates the expected molecular composition and integrity of the purified A4 Antibody preparation.



Amyloid A4 Antibody APP/9971R in Human Brain Tissue IHC. Immunohistochemistry staining of FFPE human brain tissue with Amyloid A4 Antibody clone APP/9971R demonstrates heterogeneous brown staining within the brain parenchyma, including cytoplasmic and neuropil-associated signal. HIER was performed by boiling sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 min followed by cooling before testing. The PBS negative-control inset shows little to no corresponding brown staining, supporting the specificity of the observed A4 Antibody signal under the tested conditions.

Description

Amyloid A4 Antibody APP/9971R reagents are used to investigate amyloid precursor protein (APP) and APP-derived protein species associated with amyloid biology. APP is a type I transmembrane glycoprotein that undergoes extensive proteolytic processing and alternative splicing. Historically, APP and its amyloid-associated products have been described using names including amyloid beta A4 protein, A4, and PreA4, terminology that remains relevant to research examining APP expression and processing.

APP can undergo amyloidogenic or non-amyloidogenic processing. Alpha-secretase cleavage within the amyloid beta region prevents formation of intact amyloid beta peptide, whereas sequential cleavage by beta- and gamma-secretases generates amyloid beta peptides of varying lengths. Amyloid beta 40 and amyloid beta 42 are among the most extensively studied products, with amyloid beta 42 exhibiting a greater tendency to aggregate into oligomers and fibrillar structures.

APP and its cleavage products are investigated in neuronal development, synaptic biology, cell adhesion, protein trafficking, and intracellular signaling. APP belongs to a family that also includes amyloid precursor-like proteins APLP1 and APLP2. Several APP isoforms are generated through alternative splicing, and differences in proteolytic processing further increase the diversity of APP-associated molecular species that may be encountered experimentally.

Amyloid A4 and related APP-derived products are studied extensively in neurodegenerative disease research. Amyloid beta accumulation and plaque formation are characteristic features of Alzheimer disease pathology, while altered APP metabolism is also investigated in relation to neuronal dysfunction and other neurological conditions. An A4 Antibody directed against an APP region can therefore support studies examining the precursor protein and amyloid-associated biology while providing an alternative historical terminology for APP research.

An Amyloid A4 Antibody such as clone APP/9971R provides a monoclonal reagent generated against amino acids 500-700 of human APP. This region encompasses a substantial portion of the APP precursor associated with amyloid processing, rather than representing an immunogen consisting solely of the isolated amyloid beta peptide. NSJ Bioreagents offers the APP/9971R monoclonal antibody for research into APP expression, amyloid-associated processing, and related neuroscience biology.

For a monoclonal targeting the same protein family and amyloid-associated region, see our Amyloid Beta Antibody APP/3345 / Beta Amyloid Antibody page.

Application Notes

Optimal dilution of the Amyloid A4 Antibody APP/9971R / A4 Monoclonal Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 500-700 from human APP protein was used as the immunogen for the Amyloid A4 Antibody APP/9971R.

Storage

Aliquot the Amyloid A4 Antibody APP/9971R and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Amyloid A4 antibody, A4 antibody, Amyloid beta A4 protein antibody, APP antibody, Amyloid beta precursor protein antibody, PreA4 antibody, Beta amyloid antibody, ABETA antibody

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