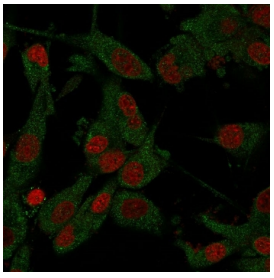
Amyloid Beta Antibody APP/3345 / Beta Amyloid Antibody [clone APP/3345] (V8733)

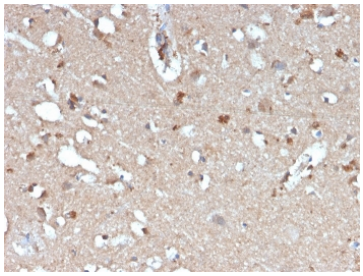
Catalog No.	Formulation	Size
V8733-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8733-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8733SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

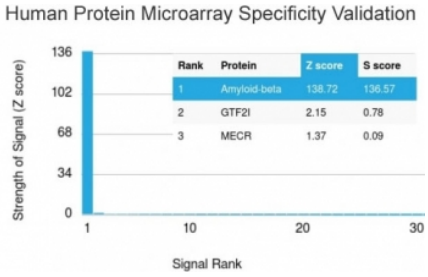
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2c, kappa
Clone Name	APP/3345
Purity	Protein G affinity chromatography
UniProt	P05067
Localization	Membrane
Applications	Immunofluorescence: 1-2ug/ml Flow cytometry: 1-2ug/million cells Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This Amyloid Beta Antibody APP/3345 / Beta Amyloid Antibody is available for research use only.



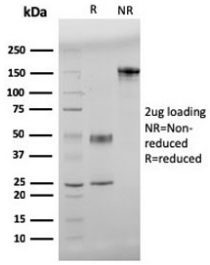
Amyloid Beta Antibody APP/3345 in U-87 MG Cells IF. Immunofluorescence staining of PFA-fixed human U-87 MG cells with Amyloid Beta Antibody clone APP/3345 shows green cytoplasmic staining with a granular to punctate distribution and areas of increased perinuclear signal. Red nuclear counterstaining delineates the nuclei, which show little green fluorescence. The observed cellular distribution demonstrates recognition by the Beta Amyloid Antibody in fixed U-87 MG cells.



Amyloid Beta Antibody APP/3345 in Human Brain Tissue IHC. Immunohistochemistry staining of FFPE human brain tissue with Amyloid Beta Antibody clone APP/3345 demonstrates widespread brown staining throughout the neuropil with more prominent staining associated with scattered cells and cellular processes. Tissue sections underwent HIER in 10 mM Tris with 1 mM EDTA, pH 9, for 20 min followed by cooling before testing. The Beta Amyloid Antibody produces a distinct tissue-associated staining pattern against the hematoxylin-counterstained brain section.



Amyloid Beta Antibody APP/3345 Protein Microarray Validation. Protein Microarray Validated analysis of Amyloid Beta Antibody clone APP/3345 on a HuProt microarray containing more than 19,000 full-length human proteins identifies the intended amyloid beta/APP target as the highest-ranked signal, with substantial separation from the next-ranked proteins. The Z-score represents signal strength in standard deviations above the array mean, while the S-score measures the difference between the target Z-score and the next-highest signal. The pronounced separation of the intended target supports the specificity of this Beta Amyloid Antibody in the protein microarray assay.



Purified Amyloid Beta Antibody APP/3345 Reducing and Non-Reducing SDS-PAGE. SDS-PAGE analysis of purified, BSA-free Amyloid Beta Antibody clone APP/3345 shows prominent antibody heavy and light 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 Beta Amyloid Antibody preparation.

Description

Amyloid Beta Antibody reagents are used to investigate amyloid beta precursor protein (APP) and the proteolytic products generated from this widely expressed type I transmembrane protein. APP undergoes sequential processing through several proteolytic pathways that produce soluble extracellular fragments, membrane-associated C-terminal fragments, and amyloid beta peptides. The balance among these processing events is an important area of neuroscience research because particular amyloid beta species can aggregate into oligomers, fibrils, and extracellular deposits associated with Alzheimer disease pathology.

APP can undergo non-amyloidogenic cleavage by alpha-secretase within the amyloid beta region, preventing formation of intact amyloid beta peptide. Alternatively, beta-secretase cleavage followed by gamma-secretase processing generates amyloid beta peptides of varying lengths. Amyloid beta 40 and amyloid beta 42 are among the best characterized products, with amyloid beta 42 displaying a greater tendency to aggregate. Beta Amyloid Antibody reagents are therefore useful tools for investigating APP-associated biology and the pathways involved in amyloid formation.

APP biology extends beyond amyloid deposition. The precursor protein and its cleavage products have been implicated in neuronal development, cell adhesion, neurite growth, synaptic biology, intracellular signaling, and responses to cellular stress. APP belongs to a protein family that also includes amyloid precursor-like proteins APLP1 and APLP2. Alternative splicing and extensive proteolytic processing further increase the molecular diversity associated with APP, making the region or epitope recognized by an antibody an important consideration when interpreting experimental results.

Altered APP processing and amyloid beta accumulation are studied extensively in neurodegenerative disease. Extracellular amyloid plaques containing aggregated amyloid beta are a defining neuropathological feature of Alzheimer disease, while soluble and oligomeric amyloid beta species are investigated for their potential effects on neuronal and synaptic function. APP and amyloid beta are consequently studied in areas ranging from protein trafficking and

proteolysis to plaque formation and mechanisms of neurodegeneration.

An Amyloid Beta Antibody such as clone APP/3345 provides a monoclonal reagent directed against a region of human APP encompassing amino acids 578-680. This region includes sequence associated with amyloid beta and its precursor, making the antibody useful for research into APP-associated proteins and amyloid biology. NSJ Bioreagents offers APP/3345 for studies of amyloid beta, APP processing, and related neuroscience research.

Explore our Neuroscience Antibodies page for additional antibodies targeting proteins involved in neurodegeneration, neuronal signaling, and nervous system research.

Application Notes

Optimal dilution of the Amyloid Beta Antibody APP/3345 / Beta Amyloid Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 578-680 from the human protein was used as the immunogen for the Amyloid Beta Antibody APP/3345.

Storage

Store the Amyloid Beta Antibody APP/3345 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

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

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