

## ARG67054 anti-beta Amyloid (1 - 42) antibody [SQab30336]

Package: 100 µg  
Store at: -20°C

### Summary

Product Description	Mouse Monoclonal antibody [SQab30336] recognizes beta Amyloid (1 - 42)
Tested Reactivity	Hu
Tested Application	ELISA, WB
Specificity	This antibody specifically recognizes an epitope within beta Amyloid (x - 42). NOTE: When administered to young Tg2576 mice with minimal beta Amyloid deposition, this antibody reduced beta Amyloid accumulation in the brain.
Host	Mouse
Clonality	Monoclonal
Clone	SQab30336
Isotype	IgG2a
Target Name	beta Amyloid (1 - 42)
Species	Human
Immunogen	Synthetic peptide corresponding to beta Amyloid (1 - 42).
Epitope	Within beta Amyloid (1 - 42)
Conjugation	Un-conjugated
Alternate Names	CVAP; AAA; AICD-50; PN2; 50; Beta-APP42; AID; Gamma-CTF; S-APP-alpha; 57; AD1; PN-II; Beta-APP40; 42; 40; APPI; Alzheimer disease amyloid protein; Amyloid beta A4 protein; PreA4; ABETA; Amyloid intracellular domain 50; CTFgamma; Amyloid intracellular domain 57; 59; AICD-59; S-APP-beta; APP; AICD-57; Amyloid intracellular domain 59; ABPP; Protease nexin-II; Cerebral vascular amyloid peptide

### Application Instructions

Application table	Application	Dilution
	ELISA	1:5000 - 1:20000
	WB	1:1000 - 1:5000
Application Note	Antigen Retrieval: Heat the sections in 1 mM EDTA buffer (pH 8.0) or in 10 mM citrate buffer (pH 6.0) by microwave oven for 5 min repeated 4 times for a total 20 min heating time. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

### Properties

Form	Liquid
Purification	Purification with Protein G.
Purity	>95% (SDS-PAGE)
Buffer	PBS (pH 7.4) and 0.03% Proclin 300

Preservative	0.01% Thimerosal
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

Gene Symbol	APP
Gene Full Name	amyloid beta (A4) precursor protein
Background	<p>This gene encodes a cell surface receptor and transmembrane precursor protein that is cleaved by secretases to form a number of peptides. Some of these peptides are secreted and can bind to the acetyltransferase complex APBB1/TIP60 to promote transcriptional activation, while others form the protein basis of the amyloid plaques found in the brains of patients with Alzheimer disease. In addition, two of the peptides are antimicrobial peptides, having been shown to have bacteriocidal and antifungal activities. Mutations in this gene have been implicated in autosomal dominant Alzheimer disease and cerebroarterial amyloidosis (cerebral amyloid angiopathy). Multiple transcript variants encoding several different isoforms have been found for this gene. [provided by RefSeq, Aug 2014]</p>
Function	<p>Functions as a cell surface receptor and performs physiological functions on the surface of neurons relevant to neurite growth, neuronal adhesion and axonogenesis. Involved in cell mobility and transcription regulation through protein-protein interactions. Can promote transcription activation through binding to APBB1-KAT5 and inhibits Notch signaling through interaction with Numb. Couples to apoptosis-inducing pathways such as those mediated by G(O) and JIP. Inhibits G(o) alpha ATPase activity (By similarity). Acts as a kinesin I membrane receptor, mediating the axonal transport of beta-secretase and presenilin 1. Involved in copper homeostasis/oxidative stress through copper ion reduction. In vitro, copper-metallated APP induces neuronal death directly or is potentiated through Cu(2+)-mediated low-density lipoprotein oxidation. Can regulate neurite outgrowth through binding to components of the extracellular matrix such as heparin and collagen I and IV. The splice isoforms that contain the BPTI domain possess protease inhibitor activity. Induces a AGER-dependent pathway that involves activation of p38 MAPK, resulting in internalization of amyloid-beta peptide and leading to mitochondrial dysfunction in cultured cortical neurons. Provides Cu(2+) ions for GPC1 which are required for release of nitric oxide (NO) and subsequent degradation of the heparan sulfate chains on GPC1.</p> <p>Beta-amyloid peptides are lipophilic metal chelators with metal-reducing activity. Bind transient metals such as copper, zinc and iron. In vitro, can reduce Cu(2+) and Fe(3+) to Cu(+) and Fe(2+), respectively. Beta-amyloid 42 is a more effective reductant than beta-amyloid 40. Beta-amyloid peptides bind to lipoproteins and apolipoproteins E and J in the CSF and to HDL particles in plasma, inhibiting metal-catalyzed oxidation of lipoproteins. Beta-APP42 may activate mononuclear phagocytes in the brain and elicit inflammatory responses. Promotes both tau aggregation and TPK II-mediated phosphorylation. Interaction with overexpressed HADH2 leads to oxidative stress and neurotoxicity. Also binds GPC1 in lipid rafts.</p> <p>Appicans elicit adhesion of neural cells to the extracellular matrix and may regulate neurite outgrowth in the brain.</p> <p>The gamma-CTF peptides as well as the caspase-cleaved peptides, including C31, are potent enhancers of neuronal apoptosis.</p> <p>N-APP binds TNFRSF21 triggering caspase activation and degeneration of both neuronal cell bodies (via caspase-3) and axons (via caspase-6). [UniProt]</p>
Calculated Mw	87 kDa
PTM	Functions as a cell surface receptor and performs physiological functions on the surface of neurons relevant to neurite growth, neuronal adhesion and axonogenesis. Involved in cell mobility and transcription regulation through protein-protein interactions. Can promote transcription activation through binding to APBB1-KAT5 and inhibits Notch signaling through interaction with Numb. Couples to apoptosis-inducing pathways such as those mediated by G(O) and JIP. Inhibits G(o) alpha ATPase activity (By similarity). Acts as a kinesin I membrane receptor, mediating the axonal transport of beta-

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#### Cellular Localization

Membrane; Single-pass type I membrane protein. Membrane, clathrin-coated pit. [UniProt]