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Anti-Beta Amyloid pyro E3 (RABBIT) Antibody

Beta Amyloid pyro E3 Antibody
Catalog # ASR5667

Specification

Anti-Beta Amyloid pyro E3 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, IHC, E, I, LCI**
Application Note	**Anti-Beta Amyloid pyro Glu3 has been tested in dot blot, ELISA, Western Blot, and Immunostaining. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~86.9kDa corresponding to the appropriate cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**Beta Amyloid [Pyro Glu3] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the N-terminus 3-pyro E start point of human beta Amyloid.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Beta Amyloid pyro E3 (RABBIT) Antibody - Additional Information

Gene ID 351

Other Names
351

Purity
Anti-Beta Amyloid pyro Glu3 was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody contains no reactivity towards the 1-42 ABeta peptide. A BLAST analysis was used to suggest cross-reactivity with Human, Primate, Bovine and Sheep based on 100% sequence homology. It is not reactive with Rodentia. Cross-reactivity with beta Amyloid pyro Glu3 from other sources has not been determined.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Beta Amyloid pyro E3 (RABBIT) Antibody - Protein Information

Name APP (HGNC:620)

Function
Functions as a cell surface receptor and performs physiological functions on the surface of neurons relevant to neurite growth, neuronal adhesion and axonogenesis. Interaction between APP molecules on neighboring cells promotes synaptogenesis (PubMed:25122912). 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 (By similarity). By acting as a kinesin I membrane receptor, plays a role in axonal anterograde transport of cargo towards synapses in axons (PubMed:17062754, PubMed:23011729). 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. [Amyloid-beta protein 42]: More effective reductant than amyloid-beta protein 40. May activate mononuclear phagocytes in the brain and elicit inflammatory responses. The gamma-CTF peptides as well as the caspase-cleaved peptides, including C31, are potent enhancers of neuronal apoptosis.

Cellular Location
Cell membrane; Single-pass type I membrane protein. Membrane; Single-pass type I membrane protein. Perikaryon Cell projection, growth cone. Membrane, clathrin-coated pit. Early endosome. Cytoplasmic vesicle. Note=Cell surface protein that rapidly becomes internalized via clathrin-coated pits. Only a minor proportion is present at the cell membrane; most of the protein is present in intracellular vesicles (PubMed:20580937) During maturation, the immature APP (N-glycosylated in the endoplasmic reticulum) moves to the Golgi complex where complete maturation occurs (O-glycosylated and sulfated). After alpha-secretase cleavage, soluble APP is released into the extracellular space and the C-terminal is internalized to endosomes and lysosomes. Some APP accumulates in secretory transport vesicles leaving the late Golgi compartment and returns to the cell surface. APP sorts to the basolateral surface in epithelial cells. During neuronal differentiation, the Thr-743 phosphorylated form is located mainly in growth cones, moderately in neurites and sparingly in the cell body (PubMed:10341243). Casein kinase phosphorylation can occur either at the cell surface or within a post-Golgi compartment. Associates with GPC1 in perinuclear compartments. Colocalizes with SORL1 in a vesicular pattern in cytoplasm and perinuclear regions. [C99]: Early endosome [Amyloid-beta protein 40]: Cell surface [Gamma-secretase C-terminal fragment 59]: Nucleus. Cytoplasm Note=Located to both the cytoplasm and nuclei of neurons. It can be translocated to the nucleus through association with APBB1 (Fe65) (PubMed:11544248). In dopaminergic neurons, the phosphorylated Thr-743 form is localized to the nucleus (By similarity) {ECO:0000250|UniProtKB:P12023, ECO:0000269|PubMed:11544248}

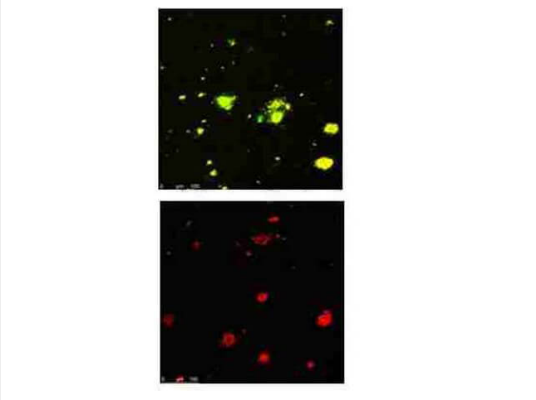
Tissue Location
Expressed in the brain and in cerebrospinal fluid (at protein level) (PubMed:2649245). Expressed in all fetal tissues examined with highest levels in brain, kidney, heart and spleen. Weak expression in liver. In adult brain, highest expression found in the frontal lobe of the cortex and in the anterior perisylvian cortex- opercular gyri. Moderate expression in the cerebellar cortex, the posterior perisylvian cortex-opercular gyri and the temporal associated cortex. Weak expression found in the striate, extra-striate and motor cortices. Expressed in cerebrospinal fluid, and plasma. Isoform APP695 is the predominant form in neuronal tissue, isoform APP751 and isoform APP770 are widely expressed in non-neuronal cells. Isoform APP751 is the most abundant form in T-lymphocytes. Appican is expressed in astrocytes.

Anti-Beta Amyloid pyro E3 (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Beta Amyloid pyro E3 (RABBIT) Antibody - Images



Immunofluorescence Microscopy of Rabbit Anti-beta Amyloid pyro E3 antibody. Tissue: human brain section. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: beta Amyloid pyro E3 antibody at 5 µg/mL for 1 h at RT. Secondary antibody: Rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: beta Amyloid pyro E3 is nuclear and cytoplasmic. Staining: Top: ß Amyloid pyro E3 as green fluorescent signal, ß Amyloid 3 as yellow signal; and Bottom: ß Amyloid 3 as red signal with co-incubation of ß Amyloid pyro E3 peptide.

Anti-Beta Amyloid pyro E3 (RABBIT) Antibody - Background

The cerebral and vascular plaques associated with Alzheimer's disease are mainly composed of Amyloid beta peptides. Beta Amyloid is derived from cleavage of the Amyloid precursor protein and varies in length from 39 to 43 amino acids. Beta Amyloid [1-40], beta Amyloid [1-42], and beta Amyloid [1-43] peptides result from cleavage of Amyloid precursor protein after residues 40, 42, and 43, respectively. The cleavage takes place by gamma-secretase during the last Amyloid precursor protein processing step. Beta Amyloid [1-40], beta Amyloid [1-42], and beta Amyloid

[1-43] peptides are major constituents of the plaques and tangles that occur in Alzheimer's disease. Beta Amyloid antibodies and peptides have been developed as tools for elucidating the biology of Alzheimer's disease. Anti-beta Amyloid [Pyro Glu11] Antibody is ideal for researchers interested in Alzheimer's Research, Cell Cycle and Replication, and Neuroscience research.