Datasheet for ABIN7042952

anti-ATP1B2 antibody (Extracellular)

4 Images

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Overview

Quantity:	25 µL
Target:	ATP1B2
Binding Specificity:	AA 99-112, Extracellular
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This ATP1B2 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunofluorescence (Cultured Cells) (IF (cc)), Live Cell Imaging (LCI)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to Beta 2 Na+/K+ ATPase
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)DTESWDQHVQKLNK, corresponding to amino acid residues 99-112 of rat ATP1B2
Isotype:	IgG
Specificity:	Extracellular, C-terminus
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Human - identical, mouse 13,14 amino acid residues identical
Characteristics:	Anti-Beta 2 Na+/K+ ATPase (extracellular) Antibody (ABIN7042952, ABIN7044643 and

Product Details

	ABIN7044644)) is a highly specific antibody directed against an epitope of the rat ATP1B2. The antibody can be used in western blot analysis. The antibody recognizes an extracellular epitope, and could potentially be used for detecting the protein in living cells. It has been designed to recognize ATP1B2 from rat, mouse, and human samples.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	ATP1B2
Alternative Name:	ATP1B2 (ATP1B2 Products)
Background:	ATP1B2, Sodium/potassium-transporting ATPase subunit beta-2, Adhesion molecule on glia, AMOG,P-type ATPases are a large family of molecular pumps that exploit a phosphorylated enzyme intermediate in a two-step mechanism of ATP hydrolysis, cycling through states which are associated with ion transport or ion counter-transport. The Na+/K+-ATPase, a member of this family, is almost exclusively found in animals, although close homologues have been reported in certain archaea, algae and oomycetes.The Na+/K+-ATPase is comprised of a nucleotide-binding (N) and phosphorylation (P) domain, a transmembrane core (M1-M6) and a large carboxy-terminal M7-M10 segment. Na+/K+-ATPase undergoes large conformational changes as part of its functional cycle giving rise to two distinct enzymatic states: E1, which is a high-affinity state for the primary transported ion- Na+ and E2, which is the low-affinity state for the Na+ ion. The two states arise from the autocatalysed formation and breakdown of a phosphoenzyme intermediate, coupled to the binding, occlusion, translocation and release of ions. The phosphorylation site is the Asp residue of a conserved DKTGT motif. The core of the membrane transport domain encompasses transmembrane helices M1-M6, which hold the main ion-binding sites and are necessary for cytoplasmic and extracellular ion transport. A terminal R domain extension, which serves as a regulatory unit, can be found in the C-terminal of the protein. This unit is auto-inhibitory and is predicted to restrict transmembrane helix movements and/or access of ions to the membrane transport core1. Na+/K+-ATPase has been implicated in the pathogenesis of Alzheimer's Disease. A deficiency in several Na+/K+-ATPase isoform genes induce learning and memory deficits, and the α isoform is altered in Alzheimer's Disease2. Alternative names: Beta 2 Na+/K+ ATPase, ATP1B2, Sodium/potassium-transporting ATPase subunit beta-2, Adhesion molecule on glia, AMOG
Gene ID:	24214

Target Details

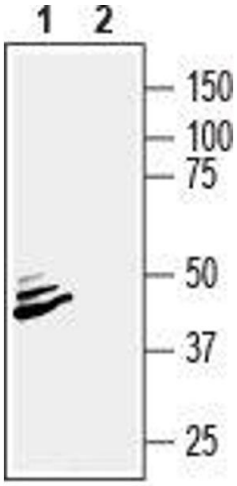
NCBI Accession:	NM_001678
UniProt:	P13638
Pathways:	Thyroid Hormone Synthesis

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:300 Application Dilutions Western blot wb: 1:200-1:400
Comment:	Cited Application: IHC Negative Control: BLP-NP012 Blocking Peptide: BLP-NP012
Restrictions:	For Research Use only

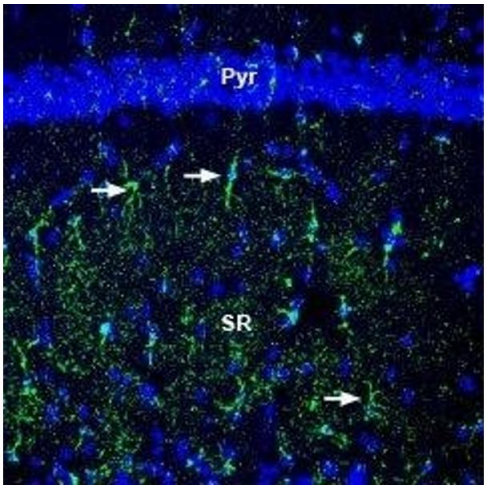
Handling

Format:	Lyophilized
Reconstitution:	Recosntitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).



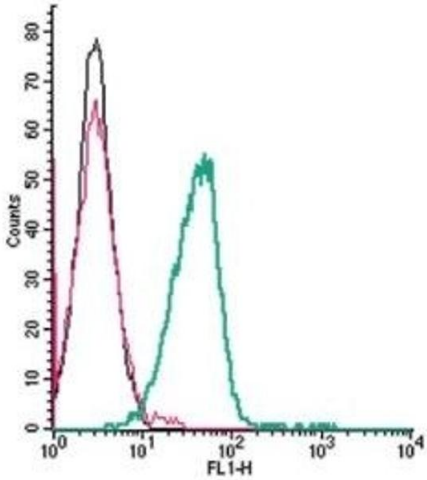
Western Blotting

Image 1. Western blot analysis of mouse brain lysate: - 1. Anti-Beta 2 Na+/K+ ATPase (extracellular) Antibody (ABIN7042952, ABIN7044643 and ABIN7044644), (1:200).2. Anti-Beta 2 Na+/K+ ATPase (extracellular) Antibody, preincubated with β 2 Na+/K+ ATPase (extracellular) Blocking Peptide (#BLP-NP012).



Immunohistochemistry

Image 2. Expression of Na+/K+ ATPase β2 (ATP1B2) in mouse hippocampus - Immunohistochemical staining of perfusion-fixed frozen mouse brain sections with Anti-Beta 2 Na+/K+ ATPase (extracellular) Antibody (ABIN7042952, ABIN7044643 and ABIN7044644), (1:300), followed by goat anti-rabbit-AlexaFluor-488. ATP1B2 staining (green) in the hippocampal CA1 region, is detected in glial cell profiles (horizontal arrows) in the stratum radiatum (SR) and pyramidal (Pyr) layer. Cell nuclei are stained with DAPI (blue).



Flow Cytometry

Image 3. Cell surface detection of ATP1B2 by indirect flow cytometry in live intact mouse BV-2 microglia cells: (black line) Cells.(red line) Cells + goat-anti-rabbit-FITC.(green line) Cells + Anti-Beta 2 Na+/K+ ATPase (extracellular) Antibody (ABIN7042952, ABIN7044643 and ABIN7044644), (5 µg) + goat-anti-rabbit-FITC.

Please check the product details page for more images. Overall 4 images are available for ABIN7042952.