

Basic Information

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|---------------------------|--|------------|
| Product Name | Anti-ATP1B1 Antibody | |
| Gene Name | ATP1B1 | |
| Source | Rabbit | |
| Clonality | Polyclonal | |
| Isotype | IgG | |
| Species Reactivity | human, mouse, rat | |
| Tested Application | WB, IHC, IF, ICC/IF, ELISA | |
| Contents | 500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol. | |
| Immunogen | E.coli-derived human ATP1B1 recombinant protein (Position: Q55-E271). | |
| Concentration | 500 ug/ml | |
| Purification | Immunogen affinity purified. | |
| Observed MW | 50 kDa | |
| Dilution Ratios | Western blot (WB): | 1:500-2000 |
| | Immunohistochemistry (IHC): | 1:50-400 |
| | Immunofluorescence (IF): | 1:50-400 |
| | Immunocytochemistry/Immunofluorescence (ICC/IF): | 1:50-400 |
| | Enzyme linked immunosorbent assay (ELISA): | 1:100-1000 |
| | (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user. | |

Storage

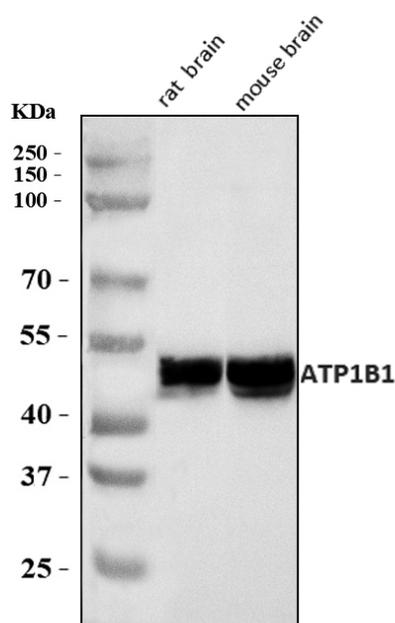
12 months from date of receipt, -20°C as supplied.

Background Information

Sodium/potassium-transporting ATPase subunit beta-1 is an enzyme that in humans is encoded by the ATP1B1 gene. The protein encoded by this gene belongs to the family of Na⁺/K⁺ and H⁺/K⁺ ATPases beta chain proteins, and to the subfamily of Na⁺/K⁺ -ATPases. Na⁺/K⁺ -ATPase is an integral membrane protein responsible for establishing and maintaining the electrochemical gradients of Na and K ions across the plasma membrane. These gradients are essential for osmoregulation, for sodium-coupled transport of a variety of organic and inorganic molecules, and for electrical excitability of nerve and muscle. This enzyme is composed of two subunits, a large catalytic subunit (alpha) and a

smaller glycoprotein subunit (beta). The beta subunit regulates, through assembly of alpha/beta heterodimers, the number of sodium pumps transported to the plasma membrane. The glycoprotein subunit of Na⁺/K⁺-ATPase is encoded by multiple genes. This gene encodes a beta 1 subunit. Alternatively spliced transcript variants encoding different isoforms have been described, but their biological validity is not known.

Selected Validation Data



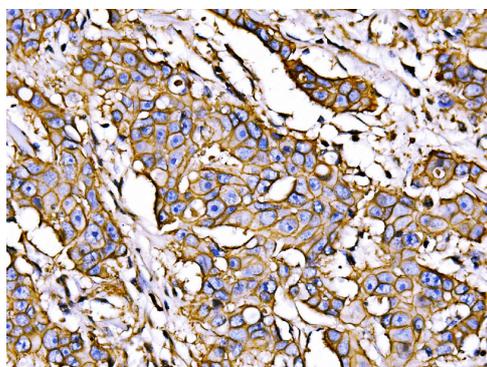
Western blot analysis of ATP1B1 using anti-ATP1B1 antibody (A03469-1). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: rat brain tissue lysates,

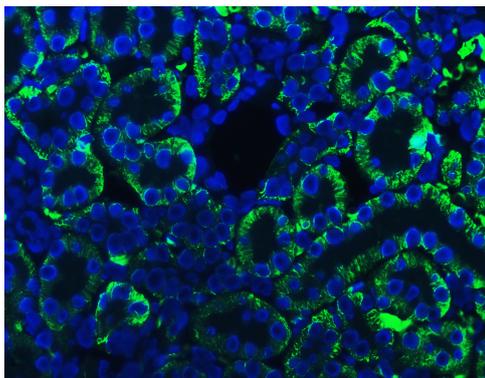
Lane 2: mouse brain tissue lysates.

After electrophoresis, proteins were transferred to a membrane.

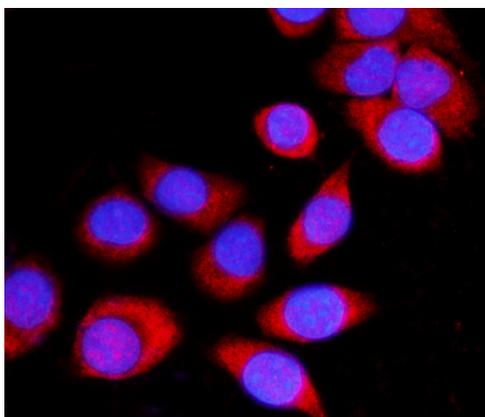
Then the membrane was incubated with rabbit anti-ATP1B1 antigen affinity purified polyclonal antibody (A03469-1) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for ATP1B1 at approximately 50 kDa. The expected band size for ATP1B1 is at 35 kDa.



IHC analysis of ATP1B1 using anti-ATP1B1 antibody (A03469-1). ATP1B1 was detected in a paraffin-embedded section of human breast cancer tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-ATP1B1 Antibody (A03469-1) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.



IF analysis using anti- ATP1B1 Antibody (A03469-1). detected in paraffin-embedded section of rat kidney tissue. The tissue section were stained using the Fluoro488-conjugated Anti-rabbit IgG Secondary Antibody (green) (Catalog # BA1127) and counterstained with DAPI (blue).



ICC/IF analysis of ATP1B1 using anti-ATP1B1 antibody (A03469-1). ATP1B1 was detected in an immunocytochemical section of SiHa cells. The section was incubated with rabbit anti-ATP1B1 Antibody (A03469-1) at a dilution of 1:100. Fluoro594-conjugated Anti-rabbit IgG Secondary Antibody (red)(Catalog#BA1142) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).