Anti-Na+/K+ ATPase Antibody [1G1]

RT1412

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IP, IF, IHC-P
Molecular Wt:	100-143kDa
Clone number:	1G1

Description: The ubiquitously expressed sodium/potassium-ATPase (Na+/K+-ATPase) exists as an oligomeric plasma membrane complex that couples the hydrolysis of one molecule of ATP to the importation of three Na+ ions and two K+ ions against their respective electrochemical gradients. As a member of the P-type family of ion motives, Na+/K+-ATPase plays a critical role in maintaining cellular volume, resting membrane potential and Na+-coupled solute transport. Multiple isoforms of three subunits, α, β and γ, comprise the Na+/K+-ATPase oligomer. The α subunit contains the binding sites for ATP and the cations; the glycosylated β subunit ensures correct folding and membrane insertion of the α subunits. The small γ subunit co-localizes with the α subunit in nephron segments, where it increases the affinity of Na+/K+-ATPase for ATP. The β subunit, but not the γ subunit, is essential for normal activity of Na+/K+-ATPase.

Immunogen: Amino acids 551-850 of Na+/K+-ATPase α1 of human origin.

Positive control: Hela, human duodenum tissue, human kidney tissue, human brain tissue.

Subcellular location: Melanosome, Cell membrane

Database links: SwissProt: P05023 Human

Recommended Dilutions:

WB	1:2,000-1:1,0000
IP	1-2 μg per 100-500 μg of total protein(1 ml of cell lysate)
IF	1:50-1:500
IHC-P	1:50-1:500

Storage Buffer: 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Storage Instruction: Store at +4℃

Purity: Protein A affinity purified.

Images

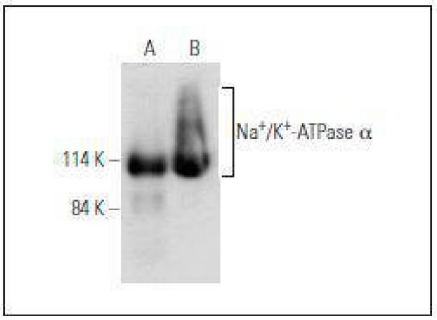

Fig1: Western blot analysis of Na+/K+-ATPase α expression in human kidney (A) and human brain (B) tissue extracts.

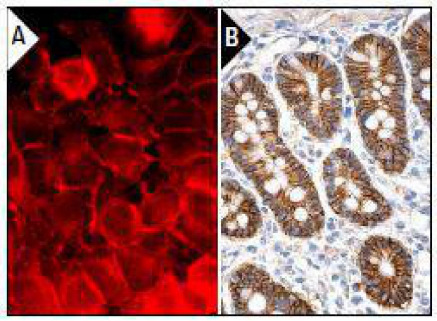

Fig2: Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing membrane staining of glandular cells (B).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Z gel, P., et al. 2013. The dimerization domain in outer segment guanylate cyclase is a Ca2+-sensitive control switch module. Biochemistry 52: 5065-5074.
2. Chen, F., et al. 2013. Phospholipase D2 mediates signaling by ATPase class I type 8B membrane 1. J. Lipid Res. 54: 379-385.
3. Bellocci, M., et al. 2010. Azaspiracid-1 inhibits endocytosis of plasma membrane proteins in epithelial cells. Toxicol. Sci. 117: 109-121.