

Recombinant Human AT12A Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50055

Size: 10ug, 100ug

Protein Name: Potassium-transporting ATPase alpha chain 2 (HK alpha 2) (Non-gastric H(+)/K(+) ATPase subunit alpha) (EC 7.2.2.19) (Non-gastric Na(+)/K(+) ATPase subunit alpha) (EC 7.2.2.13) (Proton pump) (Sodium pump)

Synonym: ATP12A, ATP1AL1

UniProt ID: P54707

UniProt Link: www.uniprot.org/uniprotkb/P54707/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1039 AA

Molecular Weight: 116 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MHQKTPEIYSVELSGTKDIVKTDKGDGKEKYRGLKNNCLELKKKNHKEEFQKELHDDHKLSNRELE
EKYGTDIIMGLSSTRAAELLARDGPNSLTTPPKQTPEIVKFLKQMVGGFSILLWVGAFLCWIAYGIQYSS
DKSASLNNVYLGCVLGLVVILTGIFAYYQEAKESTNIMSSFNKMIPQQALVIRDSEKKTIPSEQLVVGDIV
EVKGGDQIPADIRVLSSQGCRVDNSSLTGESEPQRSSEFTHENPLETKNICFYSTTCLEGTVTGMVI
NTGDRTIIGHIASLASGVGNEKTPIAIEIEHFVHVIVAGVAVSIGILFFIIAVSLKYQVLDSIIFLIGIIVANVPE
GLLATVTVTLSTAKRMAKNCLVKNLEAVETLGSTSIICSDKTGTLTQNRMTVAHLWFDNQIFVADT
SEDHSNQVFDQSSRTWASLSKIITLCNRAEFKPGQENVPIMKKAVIGDASETALLKFSEVILGDVMEIR
KRNRKVAEIPFNSTNKFQLSIHEMDDPHGKRFLMVMKGAPERILEKCSTIMINGEEHPLDKSTAKTFH
TAYMELGGLGERVLGFCHLYLPADEFPEYTSFDIDAMNFPTSNLCFVGLLSMIDPPRSTVPDAVTKC
RSAGIKVIMVTGDHPITAKAIKSVGIISANSETVEDIAHRLNIAVEQVNKRDAKAAVVTGMELKDMSS
EQLDEILANYQEIVFARTSPQQKLIIVEGCQRQDAVVAVTGDGVNDSPALKKADIGIAMGIAGSDAAK
NAADMVLLDDNFASIVTGVEEGRILFDNLKKTIAYSLTKNIAELCPFLIYIIVGLPLPIGTITILFIDLGTDIIP
SIALAYEKAESDIMNRKPRHKNKDRLVNQPLAVYSYLHIGLMQALGAFLVYFTVYAQEGFLPRTLINLR
VEWEKDYVNDLKDSYGQEWTRYQREYLEWTGYTAFFVGILVQQIADLIIRKTRRNSIFQQGLFRNKVI
WVGITSQIIIGLILSYGLGSVTALSFTMLRAQYWVAVPHAILWVYDEVKRLFIRLYPGSWWDKNMYY

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Potassium-transporting ATPase alpha chain 2 (HK alpha 2) (Non-gastric H(+)/K(+) ATPase subunit alpha) (EC 7.2.2.19) (Non-gastric Na(+)/K(+) ATPase subunit alpha) (EC 7.2.2.13) (Proton pump) (Sodium pump) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: The catalytic subunit of a H(+)/K(+) ATPase and/or Na(+)/K(+) ATPase pump which transports K(+) ions in exchange for Na(+) and/or H(+) ions across the apical membrane of epithelial cells. Uses ATP as an energy source to pump K(+) ions into the cell while transporting Na(+) and/or H(+) ions to the extracellular compartment (PubMed:11341842, PubMed:7485470, PubMed:8853415, PubMed:9774385). Involved in the maintenance of electrolyte homeostasis through K(+) ion absorption in kidney and colon (By similarity). In the airway epithelium, may play a primary role in mucus acidification regulating its viscosity and clearance (PubMed:29391451).

Subcellular Localization: Apical cell membrane ; Multi-pass membrane protein .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.