

H⁺/K⁺ ATPase β (D-18): sc-84304

BACKGROUND

The gastric H⁺/K⁺ ATPase exists as a heterodimer consisting of an α and a β subunit that work in tandem to transport protons across plasma membranes. H⁺/K⁺ ATPase β, also known as ATP4B or ATP6B, is a 291 amino acid single-pass type II membrane protein that functions as the β subunit of the H⁺/K⁺ ATPase heterodimer. Working with the α subunit, H⁺/K⁺ ATPase β effectively catalyzes the hydrolysis of ATP coupled with the exchange of H⁺ and K⁺ ions across the plasma membrane and plays an essential role in gastric acid secretion. The gene encoding H⁺/K⁺ ATPase β maps to human chromosome 13, which houses over 400 genes, such as BRCA2 and RB1, and comprises nearly 4% of the human genome. Trisomy 13, also known as Patau syndrome, is deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

CHROMOSOMAL LOCATION

Genetic locus: ATP4B (human) mapping to 13q34; Atp4b (mouse) mapping to 8 A1.1.

SOURCE

H⁺/K⁺ ATPase β (D-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an extracellular domain of H⁺/K⁺ ATPase β of human origin.

PRODUCT

Each vial contains 100 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84304 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

H⁺/K⁺ ATPase β (D-18) is recommended for detection of H⁺/K⁺ ATPase β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

H⁺/K⁺ ATPase β (D-18) is also recommended for detection of H⁺/K⁺ ATPase β in additional species, including equine, canine and porcine.

Suitable for use as control antibody for H⁺/K⁺ ATPase β siRNA (h): sc-75217, H⁺/K⁺ ATPase β siRNA (m): sc-145846, H⁺/K⁺ ATPase β shRNA Plasmid (h): sc-75217-SH, H⁺/K⁺ ATPase β shRNA Plasmid (m): sc-145846-SH, H⁺/K⁺ ATPase β shRNA (h) Lentiviral Particles: sc-75217-V and H⁺/K⁺ ATPase β shRNA (m) Lentiviral Particles: sc-145846-V.

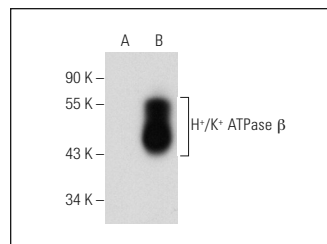
Molecular Weight of H⁺/K⁺ ATPase β: 33 kDa.

Positive Controls: H⁺/K⁺ ATPase β (h): 293 Lysate: sc-114330.

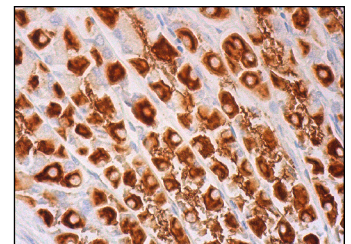
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



H⁺/K⁺ ATPase β (D-18): sc-84304. Western blot analysis of H⁺/K⁺ ATPase β expression in non-transfected: sc-110760 (A) and human H⁺/K⁺ ATPase β transfected: sc-114330 (B) 293 whole cell lysates.



H⁺/K⁺ ATPase β (D-18): sc-84304. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **H⁺/K⁺ ATPase β (C-4): sc-374094** or **H⁺/K⁺ ATPase β (B-5): sc-376393**, our highly recommended monoclonal alternatives to H⁺/K⁺ ATPase β (D-18).