SANTA CRUZ BIOTECHNOLOGY, INC.

PAT4 (E-20): sc-248218

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The proton-coupled amino acid transporter family consists of four family members, namely PAT1, PAT2, PAT3 and PAT4, all of which mediate the 1:1 symport of protons and small neutral amino acids and derivatives across both intracellular and plasma membranes. Substrates for the PAT family members include L- and D-proline, glycine and L-alanine, 3-amino-1-propanesulfonic acid, L-azetidine-2-carboxylic acid and *cis*-4-hydroxy-D-proline. PAT1 expression is high in intestine and brain where it localizes to the brush border membrane, thereby allowing PAT1 to serve as a novel route for oral drug delivery. PAT2 shows high expression in spinal cord and brain, while PAT3 expression is found in testis. PAT4 is a multi-pass membrane protein that is expressed as two alternatively spliced isoforms. All four PAT family members contain three conserved histidine residues with His 55 found to be essential for catalytic activity of PAT1.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SLC36A4 (human) mapping to 11q21; Slc36a4 (mouse) mapping to 9 A2.

SOURCE

PAT4 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PAT4 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-248218 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PAT4 (E-20) is recommended for detection of PAT4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with PAT1, PAT2 or PAT3.

Suitable for use as control antibody for PAT4 siRNA (h): sc-96627, PAT4 siRNA (m): sc-152034, PAT4 shRNA Plasmid (h): sc-96627-SH, PAT4 shRNA Plasmid (m): sc-152034-SH, PAT4 shRNA (h) Lentiviral Particles: sc-96627-V and PAT4 shRNA (m) Lentiviral Particles: sc-152034-V.

Molecular Weight of PAT4: 56 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.