SANTA CRUZ BIOTECHNOLOGY, INC.

USP4 (K-17): sc-79320

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The ubiquitin (Ub) pathway involves three sequential enzymatic steps that facilitate the conjugation of Ub and Ub-like molecules to specific protein substrates. Through the use of a wide range of enzymes that can add or remove ubiquitin, the Ub pathway controls many intracellular processes such as signal transduction, transcriptional activation and cell cycle progression. USP4 (ubiquitin-specific-processing protease 4), also known as ubiquitin carboxyl-terminal hydrolase 4, UNP or UNPH (ubiquitous nuclear protein homolog), is a 963 amino acid nucleocytoplasmic protein that belongs to the peptidase C19 family. USP4 binds to the C-terminus of Adenosine A_{2A}-R, a G_s-coupled receptor, and enhances cell surface expression of the functionally active receptor. USP4 contains one DUSP domain and exists as two isoforms due to alternative splicing.

REFERENCES

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4. Soboleva, T.A., Jans, D.A., Johnson-Saliba, M. and Baker, R.T. 2005. Nuclear-cytoplasmic shuttling of the oncogenic mouse UNP/USP4 deubiquitylating enzyme. J. Biol. Chem. 280: 745-752.
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6. Toews, M.L. 2006. Adenosine receptors find a new partner and move out. Mol. Pharmacol. 69: 1075-1078.
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CHROMOSOMAL LOCATION

Genetic locus: USP4 (human) mapping to 3p21.31; Usp4 (mouse) mapping to 9 F2.

STORAGE

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

SOURCE

USP4 (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of USP4 of human 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-79320 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

USP4 (K-17) is recommended for detection of USP4 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).

USP4 (K-17) is also recommended for detection of USP4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for USP4 siRNA (h): sc-76851, USP4 siRNA (m): sc-76852, USP4 shRNA Plasmid (h): sc-76851-SH, USP4 shRNA Plasmid (m): sc-76852-SH, USP4 shRNA (h) Lentiviral Particles: sc-76851-V and USP4 shRNA (m) Lentiviral Particles: sc-76852-V.

Molecular Weight of USP4: 110 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.

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.