

USP38 (C-20): sc-82388

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. USP38 (ubiquitin specific peptidase 38), also known as HP43.8KD, is a 1,042 amino acid deubiquitinating enzyme that participates in the Ub pathway. A member of the peptidase C19 family, the catalytic activity of USP38 involves a combination of the ubiquitin carboxyl-terminal thiolester and water to produce ubiquitin and a thiol. USP38 is highly expressed in skeletal muscle and adrenal gland.

REFERENCES

1. D'Andrea, A. and Pellman, D. 1998. Deubiquitinating enzymes: a new class of biological regulators. *Crit. Rev. Biochem. Mol. Biol.* 33: 337-352.
2. Frederick, A., et al. 1998. The human UNP locus at 3p21.31 encodes two tissue-selective, cytoplasmic isoforms with deubiquitinating activity that have reduced expression in small cell lung carcinoma cell lines. *Oncogene* 16: 153-165.
3. Chung, C.H. and Baek, S.H. 1999. Deubiquitinating enzymes: their diversity and emerging roles. *Biochem. Biophys. Res. Commun.* 266: 633-640.
4. Kim, J., et al. 2000. Discovery of a novel, paternally expressed ubiquitin-specific processing protease gene through comparative analysis of an imprinted region of mouse chromosome 7 and human chromosome 19q13.4. *Genome Res.* 10: 1138-1147.
5. DeSalle, L.M., et al. 2001. The de-ubiquitinating enzyme Unp interacts with the retinoblastoma protein. *Oncogene* 20: 5538-5542.
6. Schoenfeld, A.R., et al. 2004. BRCA2 is ubiquitinated *in vivo* and interacts with USP11, a deubiquitinating enzyme that exhibits pro-survival function in the cellular response to DNA damage. *Mol. Cell. Biol.* 24: 7444-7455.
7. Zhao, Y., et al. 2008. A TFTC/STAGA module mediates Histone H2A and H2B deubiquitination, coactivates nuclear receptors, and counteracts heterochromatin silencing. *Mol. Cell* 29: 92-101.

CHROMOSOMAL LOCATION

Genetic locus: USP38 (human) mapping to 4q31.21; Usp38 (mouse) mapping to 8 C2.

SOURCE

USP38 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of USP38 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-82388 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

USP38 (C-20) is recommended for detection of USP38 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 other USP family members.

USP38 (C-20) is also recommended for detection of USP38 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for USP38 siRNA (h): sc-76847, USP38 siRNA (m): sc-76848, USP38 shRNA Plasmid (h): sc-76847-SH, USP38 shRNA Plasmid (m): sc-76848-SH, USP38 shRNA (h) Lentiviral Particles: sc-76847-V and USP38 shRNA (m) Lentiviral Particles: sc-76848-V.

Molecular Weight of USP38: 117 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or SW-13 cell lysate: sc-24778.

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.