

USP9X (P-20): sc-55427

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. USP9 (ubiquitin specific peptidase 9), also known as USP9X, FAF or DFFRX, is a 2,547 amino acid member of the peptidase C19 family of ubiquitin proteases. Expressed ubiquitously in both fetal and adult tissue, USP9 is involved in the processing of ubiquitin precursors and ubiquitinated proteins, thereby preventing degradation and regulating protein turnover. Defects in the gene encoding USP9 are implicated in Turner syndrome, a condition in which oocytes fail to proliferate and develop, leading to the degeneration of the developing ovary. Multiple isoforms encoding long and short transcripts exist due to alternative splicing events.

REFERENCES

1. Brown, G.M., et al. 1998. Characterisation of the coding sequence and fine mapping of the human DFFRY gene and comparative expression analysis and mapping to the Sxrb interval of the mouse Y chromosome of the Dffry gene. *Hum. Mol. Genet.* 7: 97-107.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300072. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Hall, N.M., et al. 2003. Usp9y (ubiquitin-specific protease 9 gene on the Y) is associated with a functional promoter and encodes an intact open reading frame homologous to Usp9x that is under selective constraint. *Mamm. Genome* 14: 437-447.
4. Friocourt, G., et al. 2005. Doublecortin interacts with the ubiquitin protease DFFRX, which associates with microtubules in neuronal processes. *Mol. Cell. Neurosci.* 28: 153-164.

CHROMOSOMAL LOCATION

Genetic locus: USP9X (human) mapping to Xp11.4; Usp9x (mouse) mapping to X A1.1.

SOURCE

USP9X (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of USP9X 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-55427 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

USP9X (P-20) is recommended for detection of USP9X 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with USP9Y of human origin. USP9X (P-20) is also recommended for detection of USP9X in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for USP9X siRNA (h): sc-63197, USP9X siRNA (m): sc-63198, USP9X shRNA Plasmid (h): sc-63197-SH, USP9X shRNA Plasmid (m): sc-63198-SH, USP9X shRNA (h) Lentiviral Particles: sc-63197-V and USP9X shRNA (m) Lentiviral Particles: sc-63198-V.

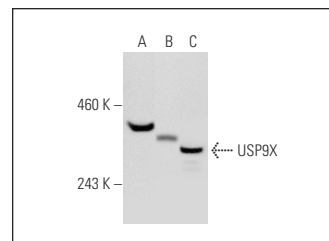
Molecular Weight of USP9X: 290 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, IMR-32 cell lysate: sc-2409 or K-562 whole cell lysate: sc-2203.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



USP9X (P-20): sc-55427. Western blot analysis of USP9X expression in HeLa (A), IMR-32 (B) and K-562 (C) whole cell lysates.

RESEARCH USE

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

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Try **USP9X/Y (E-12): sc-365353** or **USP9X/Y (G-10): sc-373818**, our highly recommended monoclonal alternatives to USP9X (P-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **USP9X/Y (E-12): sc-365353**.