

USP10 (T-20): sc-79299

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. USP10 (ubiquitin specific peptidase 10), also known as UBPO, is a 798 amino acid protein that belongs to the ubiquitin-specific protease family of cysteine proteases. Expressed in a variety of tissues, USP10 functions to catalyze the cleavage of ubiquitin from ubiquitin-conjugated protein substrates, possibly playing a role in the activity of the DNA-bound androgen receptor complex.

REFERENCES

- Nagase, T., Seki, N., Ishikawa, K., Tanaka, A. and Nomura, N. 1996. Prediction of the coding sequences of unidentified human genes. V. The coding sequences of 40 new genes (KIAA0161-KIAA0200) deduced by analysis of cDNA clones from human cell line KG-1. *DNA Res.* 3: 17-24.
- D'Andrea, A. and Pellman, D. 1998. Deubiquitinating enzymes: a new class of biological regulators. *Crit. Rev. Biochem. Mol. Biol.* 33: 337-352.
- Soncini, C., Berdo, I. and Draetta, G. 2001. Ras GAP SH3 domain binding protein (G3BP) is a modulator of USP10, a novel human ubiquitin specific protease. *Oncogene* 20: 3869-3879.
- Puente, X.S., Sánchez, L.M., Overall, C.M. and López-Otín, C. 2003. Human and mouse proteases: a comparative genomic approach. *Nat. Rev. Genet.* 4: 544-558.
- Faus, H., Meyer, H.A., Huber, M., Bahr, I. and Haendler, B. 2005. The ubiquitin-specific protease USP10 modulates androgen receptor function. *Mol. Cell. Endocrinol.* 245: 138-146.
- Grunda, J.M., Nabors, L.B., Palmer, C.A., Chhieng, D.C., Steg, A., Mikkelsen, T., Diasio, R.B., Zhang, K., Allison, D., Grizzle, W.E., Wang, W., Gillespie, G.Y. and Johnson, M.R. 2006. Increased expression of thymidylate synthetase (TS), ubiquitin specific protease 10 (USP10) and survivin is associated with poor survival in glioblastoma multiforme (GBM). *J. Neurooncol.* 80: 261-274.
- Deng, S., Zhou, H., Xiong, R., Lu, Y., Yan, D., Xing, T., Dong, L., Tang, E. and Yang, H. 2007. Over-expression of genes and proteins of ubiquitin specific peptidases (USPs) and proteasome subunits (PSs) in breast cancer tissue observed by the methods of RFDD-PCR and proteomics. *Breast Cancer Res. Treat.* 104: 21-30.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 609818. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: USP10 (human) mapping to 16q24.1; Usp10 (mouse) mapping to 8 E1.

RESEARCH USE

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

SOURCE

USP10 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of USP10 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-79299 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

USP10 (T-20) is recommended for detection of USP10 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).

USP10 (T-20) is also recommended for detection of USP10 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for USP10 siRNA (h): sc-76811, USP10 siRNA (m): sc-76812, USP10 shRNA Plasmid (h): sc-76811-SH, USP10 shRNA Plasmid (m): sc-76812-SH, USP10 shRNA (h) Lentiviral Particles: sc-76811-V and USP10 shRNA (m) Lentiviral Particles: sc-76812-V.

Molecular Weight of USP10: 100 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) 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.

STORAGE

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



Try **USP10 (C-7): sc-365828**, our highly recommended monoclonal alternative to USP10 (T-20).