SANTA CRUZ BIOTECHNOLOGY, INC.

UBPY (F-3): sc-365481



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 re-move ubiquitin, the Ub pathway controls many intracellular processes such as signal transduction, transcriptional activation and cell cycle progression. UBPY, also known as USP8 (ubiquitin carboxyl-terminal hydrolase 8) or KIAA0055, is a 1,118 amino acid protein that contains one rhodanese domain and exists in a ternary complex with OTUB1 and GRAIL. Functioning as a hydrolase, UBPY catalyzes the removal of ubiquitin from ubiquitin-conjugated proteins and plays an important role in protein turnover, cellular proliferation and T-cell anergy. The gene encoding UBPY maps to human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome.

REFERENCES

- Naviglio, S., et al. 1998. UBPY: a growth-regulated human ubiquitin isopeptidase. EMBO J. 17: 3241-3250.
- Kato, M., et al. 2000. A deubiquitinating enzyme UBPY interacts with the Src homology 3 domain of Hrs-binding protein via a novel binding motif PX(V/I)(D/N)RXXKP. J. Biol. Chem. 275: 37481-37487.
- Gnesutta, N., et al. 2001. Cloning and characterization of mouse UBPy, a deubiquitinating enzyme that interacts with the ras guanine nucleotide exchange factor CDC25^{Mm}/Ras-GRF1. J. Biol. Chem. 276: 39448-39454.
- Berruti, G., et al. 2005. The deubiquitinating enzyme mUBPy interacts with the sperm-specific molecular chaperone MSJ-1: the relation with the proteasome, acrosome, and centrosome in mouse male germ cells. Biol. Reprod. 72: 14-21.
- Row, P.E., et al. 2006. The ubiquitin isopeptidase UBPY regulates endosomal ubiquitin dynamics and is essential for receptor down-regulation. J. Biol. Chem. 281: 12618-12624.
- 6. Mizuno, E., et al. 2006. A deubiquitinating enzyme UBPY regulates the level of protein ubiquitination on endosomes. Traffic 7: 1017-1031.

CHROMOSOMAL LOCATION

Genetic locus: USP8 (human) mapping to 15q21.2; Usp8 (mouse) mapping to 2 F1.

SOURCE

UBPY (F-3) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of UBPY of human origin.

PRODUCT

Each vial contains 200 μg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

UBPY (F-3) is recommended for detection of UBPY of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for UBPY siRNA (h): sc-76795, UBPY siRNA (m): sc-76796, UBPY shRNA Plasmid (h): sc-76795-SH, UBPY shRNA Plasmid (m): sc-76796-SH, UBPY shRNA (h) Lentiviral Particles: sc-76795-V and UBPY shRNA (m) Lentiviral Particles: sc-76796-V.

Molecular Weight (predicted) of UBPY: 128 kDa.

Molecular Weight (observed) of UBPY: 134 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, HeLa whole cell lysate: sc-2200 or A2058 whole cell lysate: sc-364178.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG K BP-HRP: sc-516102 or m-IgG K BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG K BP-FITC: sc-516140 or m-IgG K BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA





UBPY (F-3): sc-365481. Western blot analysis of UBPY expression in SK-BR-3 (A), HeLa (B) and A2058 (C) whole cell lysates.

UBPY (F-3): sc-365481. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization

SELECT PRODUCT CITATIONS

 Kapuralin, K., et al. 2015. STAM2, a member of the endosome-associated complex ESCRT-0 is highly expressed in neurons. Mol. Cell. Neurosci. 67: 104-115.

RESEARCH USE

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