SANTA CRUZ BIOTECHNOLOGY, INC.

UBE2S (C-1): sc-390917

BACKGROUND

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). UBE2S (ubiquitin-conjugating enzyme E2S), also known as EPF5 or E2EPF, is a 222 amino acid protein that belongs to the E2 family of ubiquitin-conjugating enzymes. Involved in the protein degradation pathway, UBE2S catalyzes the ATP-dependent attachment of ubiquitin (Ub) to target proteins, thereby tagging them for subsequent destruction by the proteasome. UBE2S is thought to increase the rate of tumor cell proliferation, invasion and metastasis through the VHL (von Hippel-Lindau) pathway, suggesting a role for UBE2S in carcinogenesis.

REFERENCES

1. Liu, Z., et al. 1992. cDNA cloning of a novel human ubiquitin carrier protein. An antigenic domain specifically recognized by endemic pemphigus foliaceus autoantibodies is encoded in a secondary reading frame of this human epidermal transcript. J. Biol. Chem. 267: 15829-15835.
2. Wefes, I., et al. 1995. Induction of ubiquitin-conjugating enzymes during terminal erythroid differentiation. Proc. Natl. Acad. Sci. USA 92: 4982-4986.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610309. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Marques, A.C., et al. 2005. Emergence of young human genes after a burst of retroposition in primates. PLoS Biol. 3: e357.
5. Jung, C.R., et al. 2006. E2-EPF UCP targets pVHL for degradation and associates with tumor growth and metastasis. Nat. Med. 12: 809-816.

CHROMOSOMAL LOCATION

Genetic locus: UBE2S (human) mapping to 19q13.42; Ube2s (mouse) mapping to 7 A1.

SOURCE

UBE2S (C-1) is a mouse monoclonal antibody raised against amino acids 1-87 mapping at the N-terminus of UBE2S 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.

UBE2S (C-1) is available conjugated to agarose (sc-390917 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390917 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390917 PE), fluorescein (sc-390917 FITC), Alexa Fluor® 488 (sc-390917 AF488), Alexa Fluor® 546 (sc-390917 AF546), Alexa Fluor® 594 (sc-390917 AF594) or Alexa Fluor® 647 (sc-390917 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390917 AF680) or Alexa Fluor® 790 (sc-390917 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

UBE2S (C-1) is recommended for detection of UBE2S of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

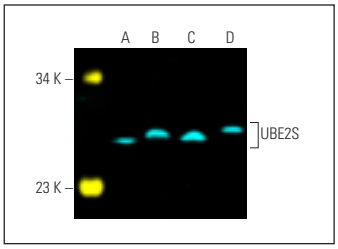
UBE2S (C-1) is also recommended for detection of UBE2S in additional species, including equine, canine and bovine.

Suitable for use as control antibody for UBE2S siRNA (h): sc-97109, UBE2S siRNA (m): sc-154856, UBE2S shRNA Plasmid (h): sc-97109-SH, UBE2S shRNA Plasmid (m): sc-154856-SH, UBE2S shRNA (h) Lentiviral Particles: sc-97109-V and UBE2S shRNA (m) Lentiviral Particles: sc-154856-V.

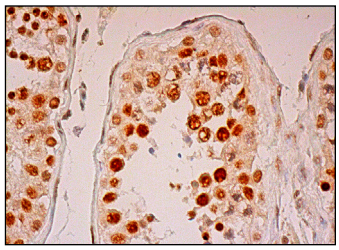
Molecular Weight of UBE2S: 24 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, PC-3 cell lysate: sc-2220 or Neuro-2A whole cell lysate: sc-364185.

DATA



UBE2S (C-1) Alexa Fluor® 647: sc-390917 AF647. Direct fluorescent western blot analysis of UBE2S expression in HeLa (**A**), PC-3 (**B**), HL-60 (**C**) and Neuro-2A (**D**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 488: sc-516790.



UBE2S (C-1): sc-390917. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts.

SELECT PRODUCT CITATIONS

1. Li, Q., et al. 2018. UBE2S expression is elevated in hepatocellular carcinoma and predicts poor prognosis of the patients. Int. J. Clin. Exp. Pathol. 11: 781-787.

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 for detailed protocols and support products.