USP5 (C-11): sc-390943

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. USP5 (ubiquitin specific peptidase 5), also known as ISOT (isopeptidase T), is a 858 amino acid zinc-binding deubiquitinating enzyme that participates in the Ub pathway. A member of the peptidase C19 family, the catalytic activity of USP5 involves a combination of the ubiquitin carboxyl-terminal thioester and water to produce ubiquitin and a thiol. USP5 contains two UBA domains and one UBP-type zinc finger. USP5 is responsible for disassembling unanchored polyubiquitin chains in the cell.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: USP5 (human) mapping to 12p13.31; Usp5 (mouse) mapping to 6 F2.

SOURCE

USP5 (C-11) is a mouse monoclonal antibody raised against amino acids 68-185 mapping near the N-terminus of USP5 of human origin.

PRODUCT

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

USP5 (C-11) is available conjugated to agarose (sc-390943 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390943 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390943 PE), fluorescein (sc-390943 FITC), Alexa Fluor® 488 (sc-390943 AF488), Alexa Fluor® 546 (sc-390943 AF546), Alexa Fluor® 594 (sc-390943 AF594) or Alexa Fluor® 647 (sc-390943 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390943 AF680) or Alexa Fluor® 790 (sc-390943 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM. Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

APPLICATIONS

USP5 (C-11) is recommended for detection of USP5 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 lystate)], 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 USP5 siRNA (h): sc-78869, USP5 siRNA (m): sc-78870, USP5 shRNA Plasmid (h): sc-78869-SH, USP5 shRNA Plasmid (m): sc-78870-SH, USP5 shRNA (h) Lentiviral Particles: sc-78869-V and USP5 shRNA (m) Lentiviral Particles: sc-78870-V.

Molecular Weight of USP5: 96 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, A549 cell lysate: sc-2413 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG 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 Luminal 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 BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Hard-set Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA

USP5 (C-11): sc-390943. Western blot analysis of USP5 expression in Sol8 (A), Neuro-2A (B), C2C12 (D), F9 (E) and NIH/3T3 (F) whole cell lysates.

USP5 (C-11): sc-390943. Western blot analysis of USP5 expression in MCF7 (A), A549 (B) and K-562 (C) whole cell lysates.

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.