



USP1 (E-14): sc-104735

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. USP1 (ubiquitin specific peptidase 1), also known as UBP, ubiquitin carboxyl-terminal hydrolase 1, ubiquitin thioesterase 1 or deubiquitinating enzyme 1, is a 785 amino acid that belongs to the peptidase C19 family of ubiquitin carboxyl-terminal hydrolases. A negative regulator of DNA damage repair, USP1 specifically deubiquitinates FANCD2 in the DNA repair pathway. Following DNA damage, autocatalytic cleavage of USP1 leads to an increase in ubiquitinated PCNA and the recruitment of POL H. Multiple isoforms of USP1 exist due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: USP1 (human) mapping to 1p31.3; Usp1 (mouse) mapping to 4 C6.

SOURCE

USP1 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of USP1 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-104735 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

USP1 (E-14) is recommended for detection of USP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

USP1 (E-14) is also recommended for detection of USP1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for USP1 siRNA (h): sc-88494, USP1 siRNA (m): sc-106677, USP1 shRNA Plasmid (h): sc-88494-SH, USP1 shRNA Plasmid (m): sc-106677-SH, USP1 shRNA (h) Lentiviral Particles: sc-88494-V and USP1 shRNA (m) Lentiviral Particles: sc-106677-V.

Molecular Weight of USP1: 90 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) 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.