

# USP25 (C-17): sc-79308

## 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. USP25 (ubiquitin specific peptidase 25), also known as USP21, is a 1,087 amino acid member of the peptidase C19 family. Expressed at high amounts in pancreas, kidney, skeletal muscle, testis, liver, heart, brain and lung, USP25 associates with the 26S proteasome and functions as a deubiquitinating enzyme in the Ub proteolytic pathway. Due to alternative splicing events, USP25 is expressed as two short, ubiquitously expressed isoforms and one long, muscle-specific isoform. The long isoform of USP25 is upregulated in myogenesis and is implicated in the pathogenesis of severe myopathies.

## REFERENCES

1. Valero, R., et al. 1999. USP25, a novel gene encoding a deubiquitinating enzyme, is located in the gene-poor region 21q11.2. *Genomics* 62: 395-405.
2. Groet, J., et al. 2000. Narrowing of the region of allelic loss in 21q11-21 in squamous non-small cell lung carcinoma and cloning of a novel ubiquitin-specific protease gene from the deleted segment. *Genes Chromosomes Cancer* 27: 153-161.
3. Valero, R., et al. 2001. Characterization of alternatively spliced products and tissue-specific isoforms of USP28 and USP25. *Genome Biol.* 2: RESEARCH0043.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604736. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Bosch-Comas, A., et al. 2006. The ubiquitin-specific protease USP25 interacts with three sarcomeric proteins. *Cell. Mol. Life Sci.* 63: 723-734.

## CHROMOSOMAL LOCATION

Genetic locus: USP25 (human) mapping to 21q21.1; Usp25 (mouse) mapping to 16 C3.1.

## SOURCE

USP25 (C-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of USP25 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-79308 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

USP25 (C-17) is recommended for detection of USP25 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).

USP25 (C-17) is also recommended for detection of USP25 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for USP25 siRNA (h): sc-76829, USP25 siRNA (m): sc-76830, USP25 shRNA Plasmid (h): sc-76829-SH, USP25 shRNA Plasmid (m): sc-76830-SH, USP25 shRNA (h) Lentiviral Particles: sc-76829-V and USP25 shRNA (m) Lentiviral Particles: sc-76830-V.

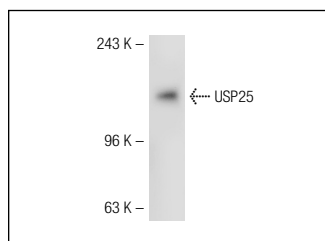
Molecular Weight of USP25: 126 kDa.

Positive Controls: mouse brain extract: sc-2253.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



USP25 (C-17): sc-79308. Western blot analysis of USP25 expression in mouse brain tissue extract.

## RESEARCH USE

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

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Try **USP25 (C-5): sc-398414**, our highly recommended monoclonal alternative to USP25 (C-17).