

USP29 (1A8): sc-517145

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. USP29 (ubiquitin specific peptidase 29), also known as HOM-TES-84/86, is a 922 amino acid deubiquitinating enzyme that participates in the Ub pathway. A member of the peptidase C19 family, the catalytic activity of USP29 involves a combination of the ubiquitin carboxyl-terminal thiolester and water to produce ubiquitin and a thiol. USP29 contains a cysteine box and a histidine box, which are characteristic of type-2 ubiquitin C-terminal hydrolases.

REFERENCES

1. D'Andrea, A., et al. 1998. Deubiquitinating enzymes: a new class of biological regulators. *Crit. Rev. Biochem. Mol. Biol.* 33: 337-352.
2. Chung, C.H., et al. 1999. Deubiquitinating enzymes: their diversity and emerging roles. *Biochem. Biophys. Res. Commun.* 266: 633-640.
3. Kim, J., et al. 2000. Discovery of a novel, paternally expressed ubiquitin-specific processing protease gene through comparative analysis of an imprinted region of mouse chromosome 7 and human chromosome 19q13.4. *Genome Res.* 10: 1138-1147.
4. Kim, J., et al. 2001. Imprinting and evolution of two Krüppel-type zinc-finger genes, ZIM3 and ZNF264, located in the PEG3/USP29 imprinted domain. *Genomics* 77: 91-98.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609546. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Kim, J., et al. 2007. Genomic organization and imprinting of the Peg3 domain in bovine. *Genomics* 90: 85-92.
7. Kim, J.D., et al. 2008. Two evolutionarily conserved sequence elements for Peg3/Us29 transcription. *BMC Mol. Biol.* 9: 108.

CHROMOSOMAL LOCATION

Genetic locus: USP29 (human) mapping to 19q13.43.

SOURCE

USP29 (1A8) is a mouse monoclonal antibody raised against amino acids 131-240 representing partial length USP29 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} 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

USP29 (1A8) is recommended for detection of USP29 of 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), 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).

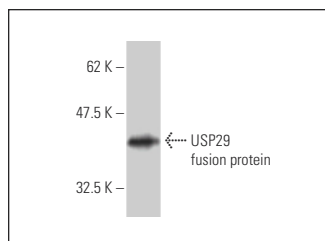
Suitable for use as control antibody for USP29 siRNA (h): sc-76833, USP29 shRNA Plasmid (h): sc-76833-SH and USP29 shRNA (h) Lentiviral Particles: sc-76833-V.

Molecular Weight of USP29: 104 kDa.

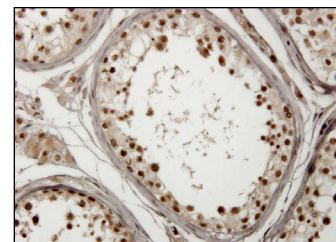
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



USP29 (1A8): sc-517145. Western blot analysis of human recombinant USP29 fusion protein.



USP29 (1A8); sc-517145. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

SELECT PRODUCT CITATIONS

1. Chandrasekaran, A.P., et al. 2021. Ubiquitin specific protease 29 functions as an oncogene promoting tumorigenesis in colorectal carcinoma. *Cancers* 13: 2706.
2. Guan, T., et al. 2023. Phosphorylation of USP29 by CDK1 governs TWIST1 stability and oncogenic functions. *Adv. Sci.* E-published.

RESEARCH USE

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