Revision 1

Store at -20C

#19758

USP39 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	65	Rabbit	#Q53GS9	10713

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

USP39 Antibody recognizes endogenous levels of total USP39 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val88 of human USP39 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Ubiquitin specific protease 39 (USP39) is a 65 kDa protein that plays an important role in pre-mRNA splicing, as well as mitotic spindle formation. It displays significant homology with ubiquitin C-terminal hydrolase proteins (UCHs), containing both an N-terminal zinc finger domain as well as UCH-1 and UCH-2-like domains also observed in the UCH2 family of proteins (1). However, USP39 lacks a catalytic cysteine residue found in UCHs and has been shown experimentally to lack peptidase activity (2). USP39 associates with the U4/U6-U5 tri-small nuclear ribonucleoprotein (U4/U6-U5 tri-snRNP) complex and is necessary for the formation of the mature spliceosome. Silencing of USP39 has been shown to adversely affect chromosome segregation and cytokinesis in U2OS cells, likely due to improper splicing of Aurora B and other mRNAs necessary for mitotic spindle formation and checkpoint function (2). In addition, USP39 has been found to be overexpressed in many types of cancers, and in most cases is associated with tumor progression and poor prognosis. Overexpression has been observed in pancreatic (3), prostate (4), colorectal (5,6), lung (6,7), gastric (8), and triple negative breast cancers (9), as well as melanoma (10) and hepatocellular carcinoma (11,12).

Background References

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3. Cai, J. et al. (2017) *Biochem Biophys Res Commun* 486, 184-90.
4. Huang, Y. et al. (2016) *Oncotarget* 7, 22016-30.
5. Yuan, X. et al. (2017) *Oncol Rep* 37, 2398-2404.
6. Fraile, J.M. et al. (2017) *J Biol Chem* 292, 4164-75.
7. Lin, Z. et al. (2016) *Mol Cell Biochem* 422, 97-107.
8. Wang, X. et al. (2016) *Mol Med Rep* 14, 301-6.
9. Liu, S. et al. (2015) *Oncol Rep* 33, 2477-83.
10. Zhao, Y. et al. (2016) *Tumour Biol* 37, 13167-76.
11. Yuan, X. et al. (2015) *Oncol Rep* 34, 823-32.
12. Pan, Z. et al. (2015) *Biol Res* 48, 18.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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