Revision 1

#5294 Store at -20C

Phospho-CTDSPL2 (Ser104) Antibody

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H Mk	Endogenous	61	Rabbit	#Q05D32	51496

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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

Phospho-CTDSPL2 (Ser104) Antibody detects endogenous levels of CTDSPL2 only when phosphorylated at Ser104.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser104 of human CTDSPL2 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

CTD small phosphatase-like protein 2 (CTDSPL2, HSPC129) is a putative RNA-polymerase II carboxy-terminal domain (CTD) phosphatase (1) that belongs to a small subfamily of CTD phosphatases (2). The CTD of RNA polymerase II contains multiple Y-S-P-T-S-P-S repeats that are phosphorylated during the transcription cycle (3,4). In general, CTD phosphatases regulate the reversible CTD phosphorylation state of RNA-polymerase II at several stages of RNA synthesis and during post-transcriptional modification (4-6). CTDSPL2 has several structural and functional similarities to other CTD phosphatases, including FCP1, SCP1, DULLARD, and UBLCP1 (1,2).
Phosphorylation of CTDSPL2 at Ser104 was identified at Cell Signaling Technology (CST) using PhosphoScan®, CST's LC-MS/MS platform for phosphorylation site discovery (7). The site was independently found in select carcinoma cell lines and in tumors (8).

Background References

1. Qian, H. et al. (2007) *Mol Cell Biochem* 303, 183-8.
2. Kim, Y. et al. (2007) *Proc Natl Acad Sci USA* 104, 6596-601.
3. Corden, J.L. et al. (1985) *Proc Natl Acad Sci USA* 82, 7934-8.
4. Ahn, S.H. et al. (2004) *Mol Cell* 13, 67-76.
5. Dahmus, M.E. (1996) *J Biol Chem* 271, 19009-12.
6. Goodrich, J.A. and Tjian, R. (1994) *Cell* 77, 145-56.
7. Rush, J. et al. (2005) *Nat Biotechnol* 23, 94-101.
8. Dephoure, N. et al. (2008) *Proc Natl Acad Sci USA* 105, 10762-7.

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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