

**CTDSP1-V250 Antibody (C-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP8461b****Specification**

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**CTDSP1-V250 Antibody (C-term) - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | <b>WB, IHC-P,E</b>     |
| Primary Accession | <a href="#">O9GZU7</a> |
| Other Accession   | <a href="#">P58466</a> |
| Reactivity        | <b>Human</b>           |
| Predicted         | <b>Mouse</b>           |
| Host              | <b>Rabbit</b>          |
| Clonality         | <b>Polyclonal</b>      |
| Isotype           | <b>Rabbit IgG</b>      |
| Calculated MW     | <b>29203</b>           |
| Antigen Region    | <b>235-261</b>         |

**CTDSP1-V250 Antibody (C-term) - Additional Information****Gene ID** 58190**Other Names**

Carboxy-terminal domain RNA polymerase II polypeptide A small phosphatase 1, Nuclear LIM interactor-interacting factor 3, NLI-IF, NLI-interacting factor 3, Small C-terminal domain phosphatase 1, SCP1, Small CTD phosphatase 1, CTDSP1, NIF3, NLIIF, SCP1

**Target/Specificity**

This CTDSP1-V250 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 235-261 amino acids from the C-terminal region of human CTDSP1-V250.

**Dilution**

WB~~1:1000  
IHC-P~~1:50~100

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

CTDSP1-V250 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**CTDSP1-V250 Antibody (C-term) - Protein Information**

**Name** CTDSP1

**Synonyms** NIF3, NLIIF, SCP1

**Function** Preferentially catalyzes the dephosphorylation of 'Ser-5' within the tandem 7 residue repeats in the C-terminal domain (CTD) of the largest RNA polymerase II subunit POLR2A. Negatively regulates RNA polymerase II transcription, possibly by controlling the transition from initiation/capping to processive transcript elongation. Recruited by REST to neuronal genes that contain RE-1 elements, leading to neuronal gene silencing in non-neuronal cells.

**Cellular Location**

Nucleus. Note=Colocalizes with RNA polymerase II

**Tissue Location**

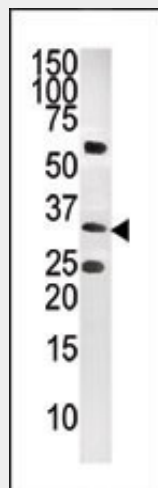
Expression is restricted to non-neuronal tissues. Highest expression in skeletal muscle, spleen, lung and placenta

**CTDSP1-V250 Antibody (C-term) - Protocols**

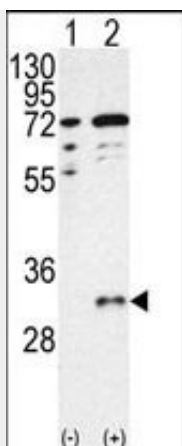
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

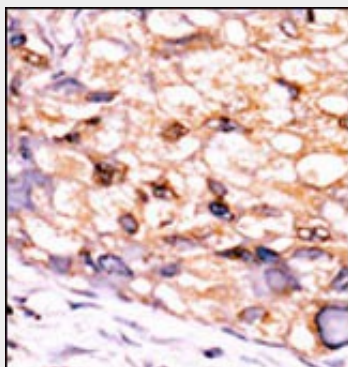
**CTDSP1-V250 Antibody (C-term) - Images**



The anti-CTDSP1-V250 (Cat. #AP8461b) is used in Western blot to detect CTDSP1-V250 in CEM tissue lysate.



Western blot analysis of CTDSP1 (arrow) using CTDSP1-V250 Antibody (C-term) (Cat.#AP8461b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the CTDSP1 gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

### CTDSP1-V250 Antibody (C-term) - Background

CTDSP1 is a class 2C phosphatase with activity dependent on the conserved DxD motif. Expression of CTDSP1 inhibited activated transcription from several promoter-reporter gene constructs, but expression of a mutant lacking phosphatase activity enhanced transcription. Neuronal gene transcription is repressed in nonneuronal cells by the repressor element-1 (RE1)-silencing transcription factor/neuron-restrictive silencer factor (REST/NRSF; 600571) complex. REST/NRSF recruits SCPs to neuronal genes that contain RE1 elements, leading to neuronal gene silencing in nonneuronal cells. Phosphatase-inactive forms of SCP interfere with REST/NRSF function and promote neuronal differentiation of P19 stem cells. Likewise, small interfering RNA directed to the single *Drosophila* SCP unmasks neuronal gene expression in S2 cells. Thus, SCP activity is an evolutionarily conserved transcriptional regulator that acts globally to silence neuronal genes.

### CTDSP1-V250 Antibody (C-term) - References

- Yeo, M., Lee, S.K., Lee, B., Ruiz, E.C., Pfaff, S.L. and Gill, G.N. *Science* 307 (5709): 596-600 (2005).  
 Fernandes, A.O., Campagnoni, C.W., Kampf, K., Feng, J.M., Handley, V.W. *J. Neurosci. Res.* 75 (4): 461-471 (2004).  
 Yeo, M., Lin, P.S., Dahmus, M.E. and Gill, G.N. *J. Biol. Chem.* 278 (28): 26078-26085 (2003).