

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

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

Application	WB, IHC-P,E
Primary Accession	O9GZU7
Other Accession	P58466
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	29203
Antigen Region	235-261

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

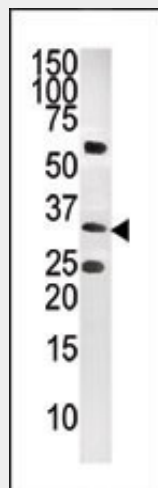
Expression is restricted to non-neuronal tissues. Highest expression in skeletal muscle, spleen, lung and placenta

CTDSP1-V250 Antibody (C-term) - Protocols

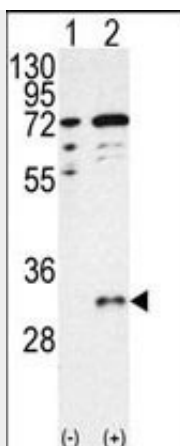
Provided below are standard protocols that you may find useful for product applications.

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

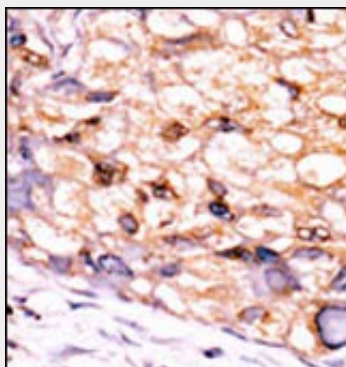
CTDSP1-V250 Antibody (C-term) - Images



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).