

Product Datasheet

CPSF6 Antibody - BSA Free

NBP1-85676

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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NBP1-85676

CPSF6 Antibody - BSA Free

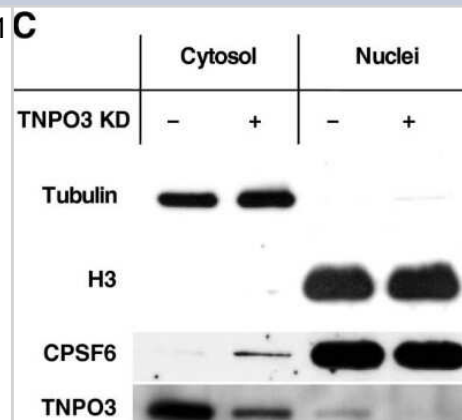
Product Information	
Unit Size	0.1 ml
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS (pH 7.2) and 40% Glycerol

Product Description	
Host	Rabbit
Gene ID	11052
Gene Symbol	CPSF6
Species	Human, Mouse, Rat
Immunogen	This antibody was developed against Recombinant Protein corresponding to amino acids: ISPSANNGDAPEDRDYMDTLPPTVGDDVVGKGAAPNVVYTYTGKRIALYIGNLT WWTTDEDLTEAVHSLGVN

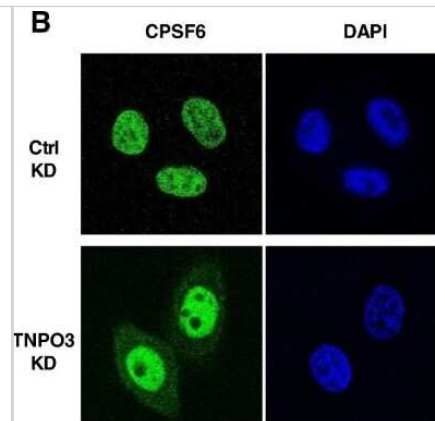
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Knockdown Validated
Recommended Dilutions	Western Blot 0.04-0.4 ug/ml, Immunohistochemistry 1:500 - 1:1000, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunohistochemistry-Paraffin 1:500 - 1:1000, Knockdown Validated
Application Notes	For IHC-Paraffin, HIER pH 6 retrieval is recommended. ICC/IF Fixation Permeabilization: Use PFA/Triton X-100.

Images

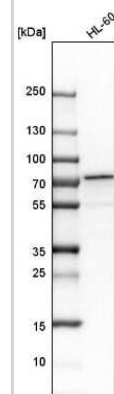
Western Blot: CPSF6 Antibody [NBP1-85676] - TNPO3 KD inhibits HIV-1 replication by shifting CPSF6 to the cytoplasm. Cell fractionation to identify the cellular localization of endogenous CPSF6. Expression of tubulin in the cytoplasm and histone 3 (H3) in the nucleus was assessed to verify the fractionation. Image collected and cropped by CiteAb from the following publication (<https://retrovirology.biomedcentral.com/articles/10.1186/1742-4690-10-20>), licensed under a CC-BY license.



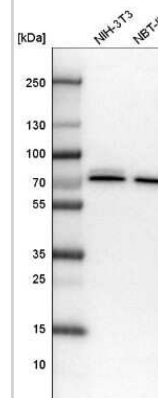
Immunocytochemistry/Immunofluorescence: CPSF6 Antibody [NBP1-85676] - TNPO3 KD inhibits HIV-1 replication by shifting CPSF6 to the cytoplasm. Immuno-fluorescence localization of endogenous CPSF6 (green) in control (Ctrl) KD or TNPO3 KD T2M-bl cells. DAPI staining (blue) was used to mark the nuclear compartment. Image collected and cropped by CiteAb from the following publication (<https://retrovirology.biomedcentral.com/articles/10.1186/1742-4690-10-20>), licensed under a CC-BY license.



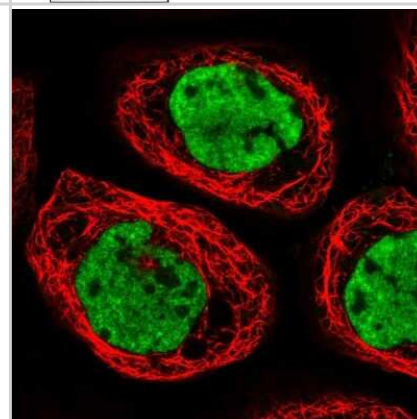
Western Blot: CPSF6 Antibody [NBP1-85676] - Analysis in human cell line HL-60.



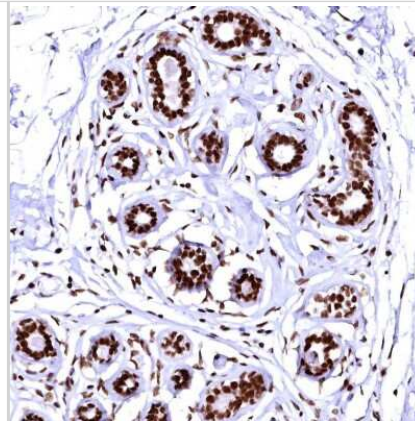
Western Blot: CPSF6 Antibody [NBP1-85676] - Analysis in mouse cell line NIH-3T3 and rat cell line NBT-II.



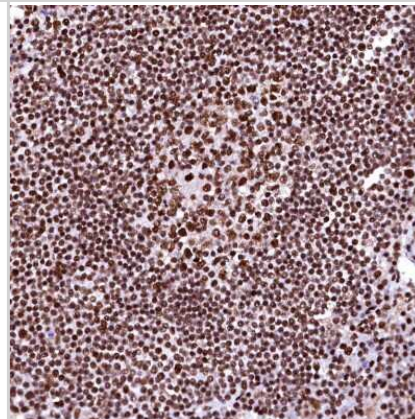
Immunocytochemistry/Immunofluorescence: CPSF6 Antibody [NBP1-85676] - Staining of human cell line A-431 shows localization to nucleoplasm & nuclear speckles. Antibody staining is shown in green.



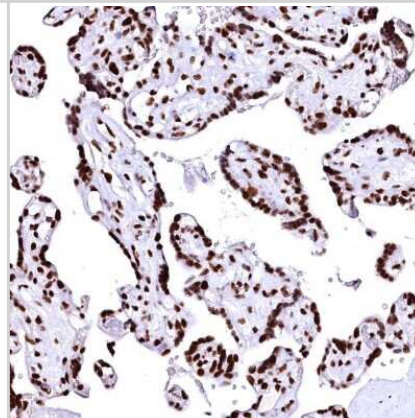
Immunohistochemistry-Paraffin: CPSF6 Antibody [NBP1-85676] - Staining of human breast shows strong nuclear positivity in glandular cells.



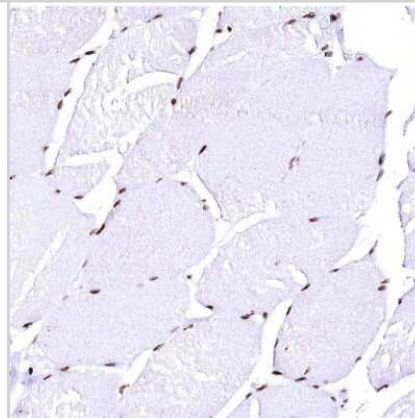
Immunohistochemistry-Paraffin: CPSF6 Antibody [NBP1-85676] - Staining of human lymph node shows strong nuclear positivity in lymphoid cells.



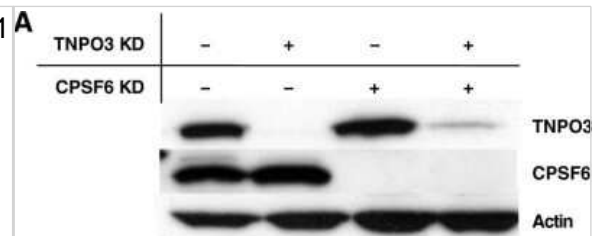
Immunohistochemistry-Paraffin: CPSF6 Antibody [NBP1-85676] - Staining of human placenta shows strong nuclear positivity in trophoblastic cells.



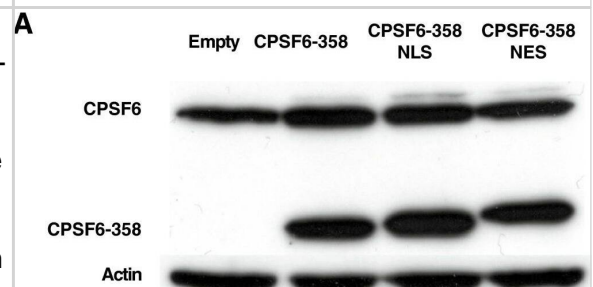
Immunohistochemistry-Paraffin: CPSF6 Antibody [NBP1-85676] - Staining of human skeletal muscle shows strong nuclear positivity in myocytes.



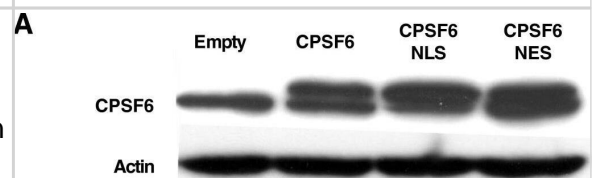
Western Blot: CPSF6 Antibody [NBP1-85676] - TNPO3 KD inhibits HIV-1 replication by shifting CPSF6 to the cytoplasm. Expression level of CPSF6 and TNPO3 in T2M-bl cells stably transduced with control or CPSF6 KD vectors and transfected with scrambled or TNPO3 specific small interfering RNA (siRNA). Cell lysate was probed in western blots with anti-TNPO3 antibody (upper panel), anti-CPSF6 antibody (middle panel) and anti-beta-actin antibody (lower panel). Image collected and cropped by CiteAb from the following publication (<https://retrovirology.biomedcentral.com/articles/10.1186/1742-4690-10-20>), licensed under a CC-BY license.



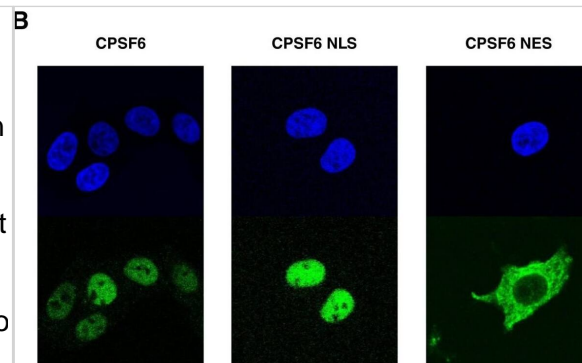
Western Blot: CPSF6 Antibody [NBP1-85676] - CPSF6-358 inhibits HIV-1 replication when localized to the cytoplasm. (A) CPSF6 protein in T2M-bl cells transduced with empty, CPSF6-358, CPSF6-358 NLS & CPSF6-358 NES vectors. Cell lysates were probed in western blots with anti-CPSF6 antibody (upper panel) & anti-β-actin antibody (lower panel). The upper panel shows the endogenous CPSF6 & the truncated form. (B) Indirect immunofluorescence showing localization of the different forms of CPSF6-358. The T2M-bl cells, transduced as in (A), were stained with an anti-HA antibody (green) for the detection of the CPSF6-358 proteins. DAPI was used to mark the nuclear compartment (blue). (C) T2M-bl stably expressing the different forms of CPSF6-358 were challenged with WT or CA mutant HIV-1NL4-3GFP reporter viruses. After 72 hrs, GFP reporter expression was assessed by flow cytometry. Data represent one of at least three independent experiments. Error bars represent ± SEM (n = 3). Image collected & cropped by CiteAb from the following publication (<https://retrovirology.biomedcentral.com/articles/10.1186/1742-4690-10-20>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



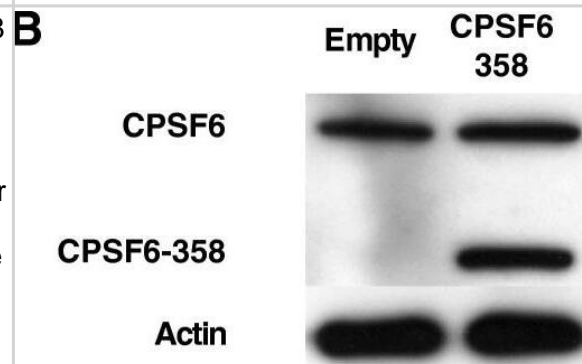
Western Blot: CPSF6 Antibody [NBP1-85676] - HIV-1 replication is inhibited when full-length CPSF6 is targeted to the cytoplasm. (A) Expression levels of CPSF6 in T2M-bl cells transduced with empty, CPSF6, CPSF6-NLS & CPSF6-NES vectors. Cell lysates were probed in western blots with anti-CPSF6 antibody (upper panel) & anti-β-actin antibody (lower panel). The upper panel shows the endogenous & exogenous full-length CPSF6 with an HA tag. (B) Localization of different forms of CPSF6 in T2M-bl cells stably expressing CPSF6, CPSF6 NLS or CPSF6 NES. The cells were stained with an anti-HA antibody (green) for the detection of the CPSF6 proteins. DAPI staining (blue) was used to mark the nuclear compartment. (C) T2M-bl stably expressing the different forms of CPSF6 were challenged with WT or CA mutant HIV-1NL4-3GFP reporter viruses. After 72 hours, GFP reporter expression was assessed by flow cytometry. Data represent one of at least three independent experiments. Error bars represent ± SEM (n = 3). Image collected & cropped by CiteAb from the following publication (<https://retrovirology.biomedcentral.com/articles/10.1186/1742-4690-10-20>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



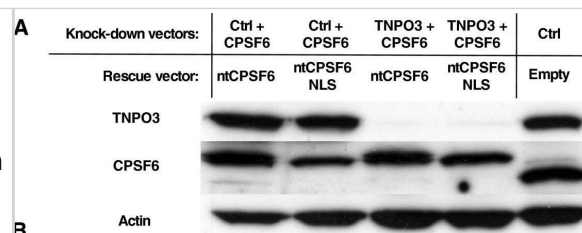
Western Blot: CPSF6 Antibody [NBP1-85676] - HIV-1 replication is inhibited when full-length CPSF6 is targeted to the cytoplasm. (A) Expression levels of CPSF6 in T2M-bl cells transduced with empty, CPSF6, CPSF6-NLS & CPSF6-NES vectors. Cell lysates were probed in western blots with anti-CPSF6 antibody (upper panel) & anti- β -actin antibody (lower panel). The upper panel shows the endogenous & exogenous full-length CPSF6 with an HA tag. (B) Localization of different forms of CPSF6 in T2M-bl cells stably expressing CPSF6, CPSF6 NLS or CPSF6 NES. The cells were stained with an anti-HA antibody (green) for the detection of the CPSF6 proteins. DAPI staining (blue) was used to mark the nuclear compartment. (C) T2M-bl stably expressing the different forms of CPSF6 were challenged with WT or CA mutant HIV-1NL4-3GFP reporter viruses. After 72 hours, GFP reporter expression was assessed by flow cytometry. Data represent one of at least three independent experiments. Error bars represent \pm SEM ($n = 3$). Image collected & cropped by CiteAb from the following publication (<https://retrovirology.biomedcentral.com/articles/10.1186/1742-4690-10-20>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



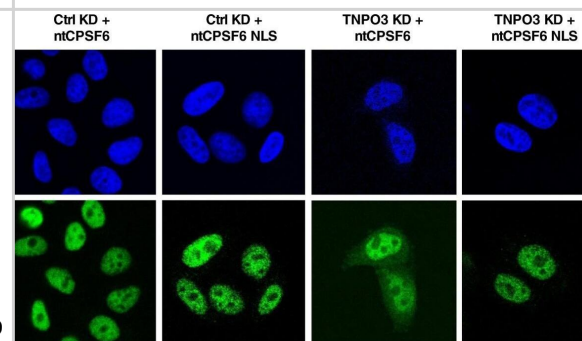
Western Blot: CPSF6 Antibody [NBP1-85676] - The effect of CPSF6-358 on the infectivity of HIV-1 CA mutants correlates with the effect of TNPO3 KD. (A) Schematic representation of the protein domains of WT CPSF6 & the truncated mutant CPSF6-358. RNA recognition motif (RRM), proline-rich domain (P-rich), arginine/serine rich domain (RS). (B) Expression levels of CPSF6 in T2M-bl cells transduced with empty or CPSF6-358 vectors. Cell lysates were probed in western blots with anti-CPSF6 antibody (upper panel) & anti- β -actin antibody (lower panel). The upper panel shows the endogenous CPSF6 & the truncated form. (C) T2M-bl cells transduced with an empty vector or with a vector encoding CPSF6-358 were challenged with a panel of 27 HIV-1-GFP reporter vectors bearing either WT CA or the indicated CA mutants. At 72 hrs the percent GFP+ cells was determined by flow cytometry as an indication of infectivity. The ratio of HIV-1 infectivity in CPSF6-358 expressing cells & empty vector cells is shown. White bars show CA mutants inhibited to a similar extent as the WT virus by CPSF6-358, black bars shows CA mutants insensitive or slightly sensitive to CPSF6-358, & gray bars show CA mutants hypersensitive to the presence of CPSF6-358 in the cell. (D) Correlation between the infectivity ratios of the 27 CA mutants when infecting Ctrl KD vs TNPO3 KD [8] & Empty vector vs CPSF6-358 ($R^2 = 0.8528$). Image collected & cropped by CiteAb from the following publication (<https://retrovirology.biomedcentral.com/articles/10.1186/1742-4690-10-20>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: CPSF6 Antibody [NBP1-85676] - TNPO3 depletion does not inhibit HIV-1 if CPSF6 is independently targeted to the nucleus. (A) CPSF6 & TNPO3 protein in TZM-bl cells stably transduced with CPSF6 KD vectors, control or TNPO3 KD vectors, & rescue of CPSF6 (ntCPSF6) with or without the SV40 T-Ag NLS. Cell lysate was probed in western blots with anti-TNPO3 antibody (upper panel), anti-CPSF6 antibody (middle panel) & anti- β -actin antibody (lower panel). (B) Localization of the non-targetable CPSF6 (ntCPSF6) constructs (green) in control (Ctrl) KD or TNPO3 KD TZM-bl cells stably depleted of CPSF6. DAPI staining (blue) was used to mark the nuclear compartment. (C) The pools of stable cell lines in (B) were challenged with WT or CA mutant HIV-1NL4-3GFP reporter viruses. After 72 hrs, GFP expression was checked by flow cytometry. Data represent one of at least three independent experiments. Error bars represent \pm SEM (n = 3). Image collected & cropped by CiteAb from the following publication (<https://retrovirology.biomedcentral.com/articles/10.1186/1742-4690-10-20>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunocytochemistry/ Immunofluorescence: CPSF6 Antibody [NBP1-85676] - TNPO3 depletion does not inhibit HIV-1 if CPSF6 is independently targeted to the nucleus. (A) CPSF6 & TNPO3 protein in TZM-bl cells stably transduced with CPSF6 KD vectors, control or TNPO3 KD vectors, & rescue of CPSF6 (ntCPSF6) with or without the SV40 T-Ag NLS. Cell lysate was probed in western blots with anti-TNPO3 antibody (upper panel), anti-CPSF6 antibody (middle panel) & anti- β -actin antibody (lower panel). (B) Localization of the non-targetable CPSF6 (ntCPSF6) constructs (green) in control (Ctrl) KD or TNPO3 KD TZM-bl cells stably depleted of CPSF6. DAPI staining (blue) was used to mark the nuclear compartment. (C) The pools of stable cell lines in (B) were challenged with WT or CA mutant HIV-1NL4-3GFP reporter viruses. After 72 hrs, GFP expression was checked by flow cytometry. Data represent one of at least three independent experiments. Error bars represent \pm SEM (n = 3). Image collected & cropped by CiteAb from the following publication (<https://retrovirology.biomedcentral.com/articles/10.1186/1742-4690-10-20>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Liu S, Wu R, Chen L et al. CPSF6 regulates alternative polyadenylation and proliferation of cancer cells through phase separation *Cell reports* 2023-10-31 [PMID: 37777964] (KD, Human)

Hu Z, Li M, Huo Z et al. U1 snRNP proteins promote proximal alternative polyadenylation sites by directly interacting with 3' end processing core factors *Journal of Molecular Cell Biology* 2022-12-26 [PMID: 36073763] (Western Blot, Immunocytochemistry/ Immunofluorescence)

Zhong Z, Ning J, Boggs EA et al. Cytoplasmic CPSF6 Regulates HIV-1 Capsid Trafficking and Infection in a Cyclophilin A-Dependent Manner *mBio* 2021-04-27 [PMID: 33758083] (Electron Microscopy)

Scoca V, Morin R, Collard M et al. HIV-induced membraneless organelles orchestrate post-nuclear entry steps *Journal of Molecular Cell Biology* 2023-04-06 [PMID: 36314049]

Peng K, Muranyi W, Glass B et al. Quantitative microscopy of functional HIV post-entry complexes reveals association of replication with the viral capsid. *eLife* 2014-12-17 [PMID: 25517934] (IF/IHC, Human)

De Iaco A, Santoni F, Vannier A et al. TNPO3 protects HIV-1 replication from CPSF6-mediated capsid stabilization in the host cell cytoplasm. *Retrovirology* 2013-02-15 [PMID: 23414560] (WB, ICC/IF, Human)



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NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

Limitations

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