

# Product Datasheet

## PNK Antibody - BSA Free NBP1-87257

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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### Publications: 9

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Updated 9/9/2025 v.20.1

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**NBP1-87257**

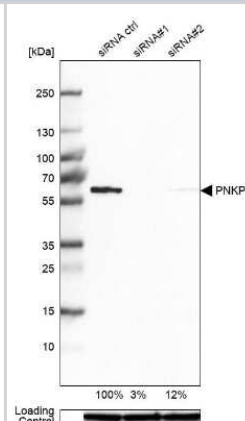
PNK Antibody - BSA Free

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	
Description	Novus Biologicals Knockout (KO) Validated Rabbit PNK Antibody - BSA Free (NBP1-87257) is a polyclonal antibody validated for use in IHC, WB, ICC/IF and Simple Western. Anti-PNK Antibody: Cited in 7 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	11284
Gene Symbol	PNKP
Species	Human, Mouse
Reactivity Notes	Mouse reactivity reported in scientific literature (PMID: 26290337).
Immunogen	This antibody was developed against Recombinant Protein corresponding to amino acids: PETRTVAVKQLGVNPSTTGTQELKPGLEGLGVGDTLYLVNGLHPLTLRWEET RTPESQPDTPPGTPLVSQDEKRDAELPKKRMKSNPGWENLEKLLVFTAAGV KPQGVAGFDLDGTLITRSGKVFTGP
Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Knockdown Validated, Knockout Validated
Recommended Dilutions	Western Blot 0.04-0.4 ug/ml, Simple Western 1:20, Immunohistochemistry 1:20 - 1:50, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunohistochemistry-Paraffin 1:20 - 1:50, Knockout Validated Validation (PMID: 30158526)., Knockdown Validated
Application Notes	For IHC-Paraffin, HIER pH 6 retrieval is recommended. ICC/IF Fixation Permeabilization: Use PFA/Triton X-100. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See <a href="#">Simple Western Antibody Database</a> for Simple Western validation: Tested in RT-4 and U-251MG, separated by Size, antibody dilution of 1:20, apparent MW was 61 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue.

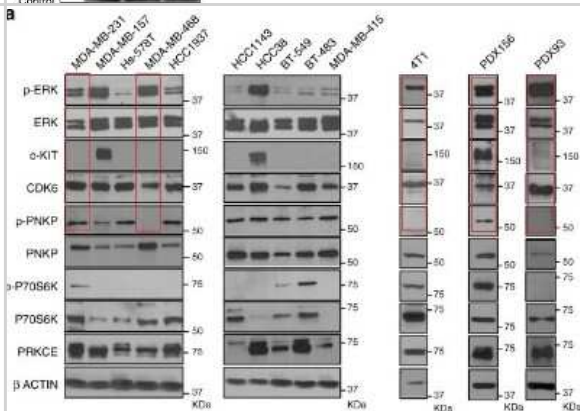


## Images

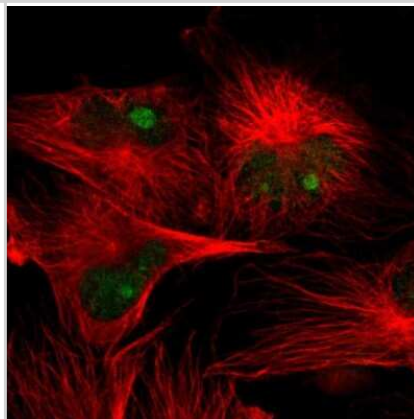
Western Blot: PNK Antibody [NBP1-87257] - Analysis in U-138MG cells transfected with control siRNA, target specific siRNA probe #1 and #2, using Anti-PNKP antibody. Remaining relative intensity is presented. Loading control: Anti-GAPDH.



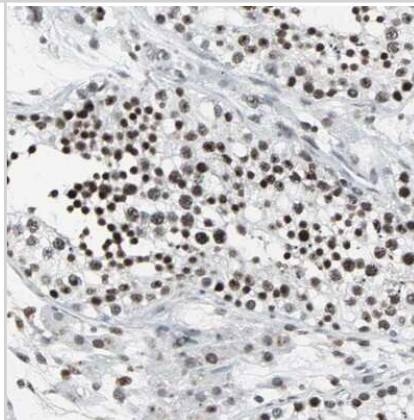
Western Blot: PNK Antibody [NBP1-87257] - In vitro therapeutic efficacy and in vivo pharmacodynamics. Western blotting showing the levels of each of the 6 kinases in the signature, in addition to their non-phosphorylated controls where applicable, in 10 human TNBC cell lines, the transplantable murine TNBC tumor model 4T1, and 2 patient-derived xenografts (PDXs). The three targets against which clinical-grade drugs are available are highlighted in red. Image collected and cropped by CiteAb from the following publication (<https://www.nature.com/articles/s41467-018-05742-z>), licensed under a CC-BY license.



Immunocytochemistry/Immunofluorescence: PNK Antibody [NBP1-87257] - Staining of human cell line U-251 MG shows localization to nucleus & nucleoli. Antibody staining is shown in green.



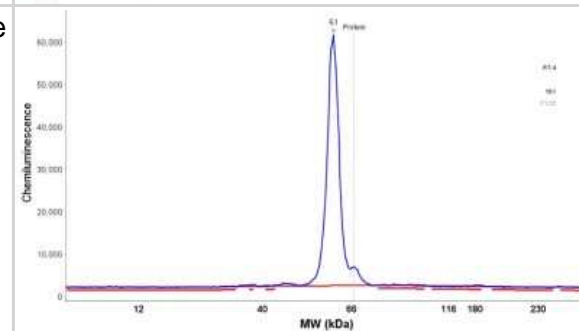
Immunohistochemistry-Paraffin: PNK Antibody [NBP1-87257] - Staining of human testis shows strong nuclear positivity in cells in seminiferous ducts.



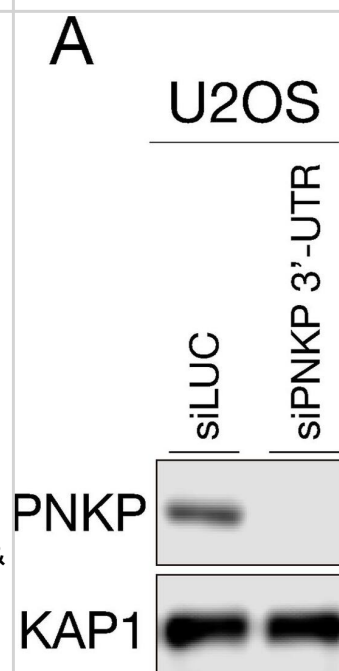
Simple Western: PNK Antibody [NBP1-87257] - Simple Western lane view shows a specific band for PNK in 0.5 mg/ml of RT-4 (Left) and U-251MG (Right) lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



Simple Western: PNK Antibody [NBP1-87257] - Electropherogram image (s) of corresponding Simple Western lane view. PNK antibody was used at 1:20 dilution on RT-4 and U-251MG lysate(s).



Western Blot: PNK Antibody [NBP1-87257] - Lysine 138, arginine 139 & arginine 141 are important for efficient DNA repair. (A) PNKP depletion by 3'-UTR siRNA PNKP was confirmed by western blot analysis. KAP1 antibody was used for loading control. (B) DNA DSB repair efficiency was analyzed by immunofluorescence using  $\gamma$ -H2AX antibody after IR exposure in GFP-PNKP & 3'-UTR siRNA PNKP-transfected U2OS cells. Graph represented percentage of  $\gamma$ -H2AX positive cells with 10  $\square$   $\gamma$ -H2AX foci. At least 200 cells were counted & experiments were performed 3 times independently. (C) DNA SSB repair efficiency was analyzed by immunofluorescence using PAN-ADP-ribose binding reagents at 30 mins after IR exposure in GFP-PNKP & 3'-UTR siRNA PNKP-transfected U2OS cells treated with 10 $\mu$ M of poly (ADP-ribose) glycohydrolase inhibitor (PARGi) for 30 mins prior to IR exposure. (D) Graph represented the intensity of ADP ribose. At least 100 cells were counted & experiments were performed 3 times independently. Error bars indicate the standard error of the mean (SEM). ns: not significant ( $p > 0.05$ ); \*\*:  $0.005 < p \leq 0.01$ ; \*\*\*\*:  $0.0005 < p \leq 0.001$ . Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/32970693>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Pradhan S, Gao R, Bush K Et Al. Huntingtin Maintains Mitochondrial Genome Integrity and Function SSRN Electronic Journal 2021-06-26

Tsukada K, Shimada M, Imamura R et al. The FHA domain of PNKP is essential for its recruitment to DNA damage sites and maintenance of genome stability Mutation Research/Fundamental and Molecular Mechanisms of Mutagenesis 2020-11-01 [PMID: 33220551] (WB, Human)

Tsukada K, Matsumoto Y, Shimada M Linker region is required for efficient nuclear localization of polynucleotide kinase phosphatase PLoS ONE 2020-09-24 [PMID: 32970693] (WB, Human)

Kuzmickas R Therapeutic Targeting of Chromatin Modifiers in Advanced Prostate Cancer Thesis (KD, WB, Mouse)

Zagorac I, Fernandez-Gaitero S, Penning R et al. In vivo phosphoproteomics reveals kinase activity profiles that predict treatment outcome in triple-negative breast cancer Nat Commun. 2018-08-28 [PMID: 30158526] (WB, IF/IHC, KO, Human)

Gao R, Chakraborty A, Geater C, et al. Mutant huntingtin impairs PNKP and ATXN3, disrupting DNA repair and transcription Elife 2019-04-17 [PMID: 30994454] (WB, Mouse)

Yip, MCJ;Keszei, AFA;Feng, Q;Chu, V;McKenna, MJ;Shao, S; Mechanism for recycling tRNAs on stalled ribosomes Nat. Struct. Mol. Biol. 2019-04-22 [PMID: 31011209] (WB, Human)

Maertens O, Kuzmickas R, Manchester HE et al. MAPK pathway suppression unmasks latent DNA repair defects and confers a chemical synthetic vulnerability in BRAF, NRAS, and NF1 mutant melanomas Cancer Discov 2019-02-01 [PMID: 30709805] (WB, Human)

Shimada M, Dumitrache LC, Russell HR, McKinnon PJ. Polynucleotide kinase-phosphatase enables neurogenesis via multiple DNA repair pathways to maintain genome stability. EMBO J. 2015-08-19 [PMID: 26290337] (WB, Mouse)





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### **Products Related to NBP1-87257**

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NBP1-87257PEP	PNK Recombinant Protein Antigen
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

For more information on our 100% guarantee, please visit [www.novusbio.com/guarantee](http://www.novusbio.com/guarantee)

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