

# Product Datasheet

## PHGDH Antibody - BSA Free

### NBP1-87311

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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**NBP1-87311**

PHGDH Antibody - BSA Free

**Product Information**

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

**Product Description**

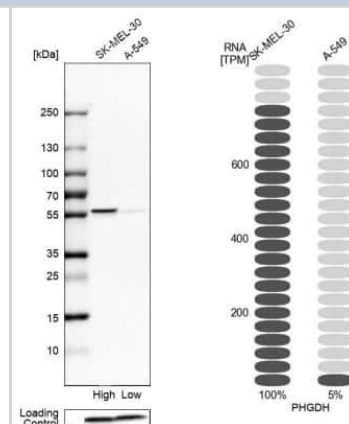
<b>Host</b>	Rabbit
<b>Gene ID</b>	26227
<b>Gene Symbol</b>	PHGDH
<b>Species</b>	Human, Mouse, Rat
<b>Immunogen</b>	This antibody was developed against Recombinant Protein corresponding to amino acids: LEEIWPLCDFITVHTPLLPSTTGLLNDNTFAQCKKGVRVVNCARGGIVDEGALL RALQSGQCAGAALDVFTEEPDRDRALVDHENVISCPHLGASTKEAQSRCGEEI AVQFVDM

**Product Application Details**

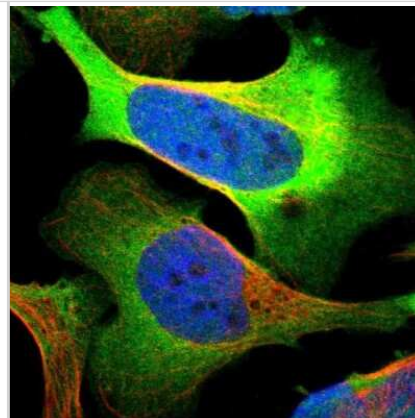
<b>Applications</b>	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
<b>Recommended Dilutions</b>	Western Blot 0.04-0.4 ug/ml, Simple Western 1:20, Immunohistochemistry 1:500 - 1:1000, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunohistochemistry-Paraffin 1:500 - 1:1000
<b>Application Notes</b>	ICC/IF Fixation Permeabilization: Use PFA/Triton X-100. IHC-Paraffin HIER pH6 retrieval is recommended. 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 56 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue.

**Images**

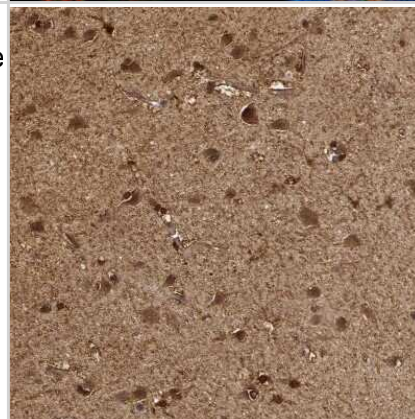
Western Blot: PHGDH Antibody [NBP1-87311] - Analysis in human cell lines SK-MEL-30 and A-549. Corresponding RNA-seq data are presented for the same cell lines. Loading control: Anti-COX4I1.



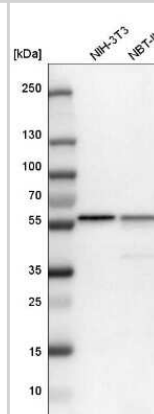
Immunocytochemistry/Immunofluorescence: PHGDH Antibody [NBP1-87311] - Staining of human cell line U-2 OS shows localization to plasma membrane & cytosol. Antibody staining is shown in green.



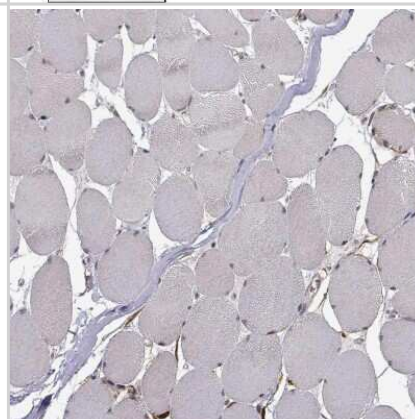
Immunohistochemistry-Paraffin: PHGDH Antibody [NBP1-87311] - Immunohistochemical staining of human cerebral cortex shows moderate to strong cytoplasmic positivity in neuronal and glial cells.



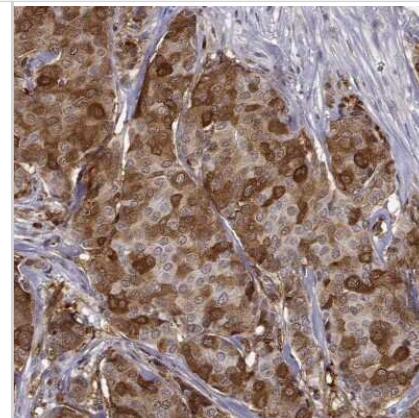
Western Blot: PHGDH Antibody [NBP1-87311] - Analysis in mouse cell line NIH-3T3 and rat cell line NBT-II.



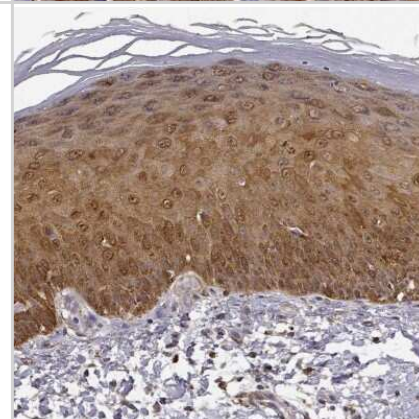
Immunohistochemistry-Paraffin: PHGDH Antibody [NBP1-87311] - Immunohistochemical staining of human skeletal muscle shows no positivity as expected.



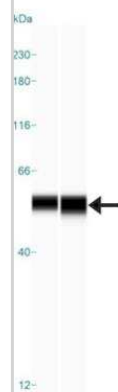
Immunohistochemistry-Paraffin: PHGDH Antibody [NBP1-87311] - Immunohistochemical staining of human breast cancer shows moderate to strong cytoplasmic positivity in tumor cells.



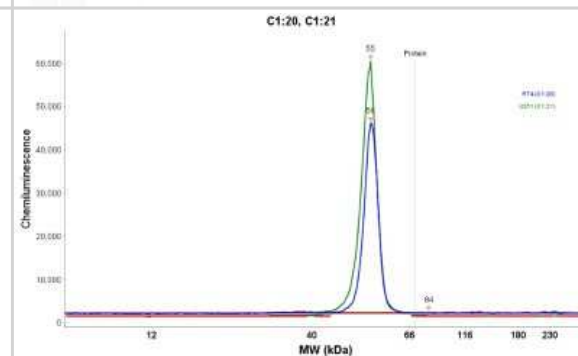
Immunohistochemistry-Paraffin: PHGDH Antibody [NBP1-87311] - Immunohistochemical staining of human skin shows moderate cytoplasmic positivity in epidermal cells.



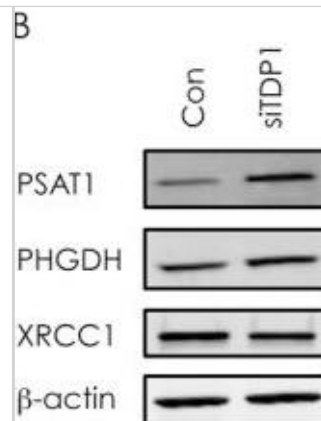
Simple Western: PHGDH Antibody [NBP1-87311] - Simple Western lane view shows a specific band for PHGDH in 0.2 mg/ml of RT-4 (Left) and U-251MG (Right) lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



Simple Western: PHGDH Antibody [NBP1-87311] - Electropherogram image(s) of corresponding Simple Western lane view. PHGDH antibody was used at 1:20 dilution on RT-4 and U-251MG lysate(s).



Knockdown of PNKP or TDP1 leads to increase in expression of PSAT1 and PHGDH. Western blot analysis of XRCC1, PHGDH and PSAT1 expression upon KD of PNKP (A) or TDP1 (B).  $\beta$ -Actin served as a loading control. (C) TDP1 mRNA levels after KD of TDP1, quantified by qPCR and normalised to GAPDH.



## Publications

Ishida CT, Zhang Y, Bianchetti E et al. Metabolic Reprogramming by Dual Akt/Erk Inhibition Through Imipridones Elicits Unique Vulnerabilities in Glioblastoma. Clin. Cancer Res. 2018-07-23 [PMID: 30037819] (WB, Human)

Gina M DeNicola, Pei-Hsuan Chen, Edouard Mullarky et al. NRF2 regulates serine biosynthesis in non-small cell lung cancer. Nature Genetics 2015-10-19 [PMID: 26482881] (WB, Human)

Mattaini KR, Brignole EJ, Kini M et al. An epitope tag alters phosphoglycerate dehydrogenase structure and impairs ability to support cell proliferation. Cancer Metab 2015-01-01 [PMID: 25926973] (WB, ICC/IF, Human)

Markkanen E, Fischer R, Ledentcova M et al. Cells deficient in base-excision repair reveal cancer hallmarks originating from adjustments to genetic instability. Nucleic Acids Res 2015-03-23 [PMID: 25800737] (WB, Human)

Maddocks OD, Berkers CR, Mason SM et al. Serine starvation induces stress and p53-dependent metabolic remodelling in cancer cells. Nature 2013-01-24 [PMID: 23242140]

Nilsson LM, Forshell TZ, Rimpi S et al. Mouse genetics suggests cell-context dependency for Myc-regulated metabolic enzymes during tumorigenesis. PLoS Genet 2012-01-01 [PMID: 22438825]

Possemato R, Marks KM, Shaul YD et al. Functional genomics reveal that the serine synthesis pathway is essential in breast cancer. Nature 2011-08-01 [PMID: 21760589]



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### **Products Related to NBP1-87311**

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NBP1-87311PEP	PHGDH 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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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.

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