

# Product Datasheet

## GPRC5A/RAI3 Antibody - BSA Free NBP1-89743

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: 2

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**NBP1-89743**

GPRC5A/RAI3 Antibody - BSA Free

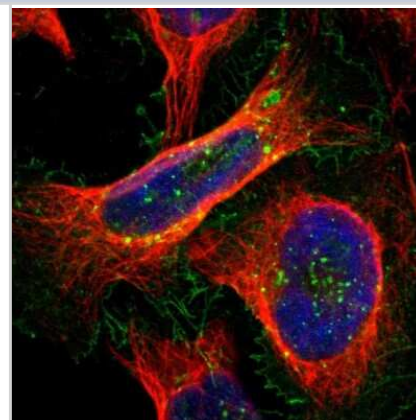
Product Information	
Unit Size	0.1 ml
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium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

Product Description	
Host	Rabbit
Gene ID	9052
Gene Symbol	GPRC5A
Species	Human
Reactivity Notes	Immunogen displays the following percentage of sequence identity for non-tested species: Mouse (82%), Rat (81%)
Immunogen	This antibody was developed against Recombinant Protein corresponding to amino acids: LTKQRNPM DYPVEDAFCKPQLVKKSYGVENRAYSQEEITQGFEETGDTLYAPY STHFQLQNQPPQKEFSIPR

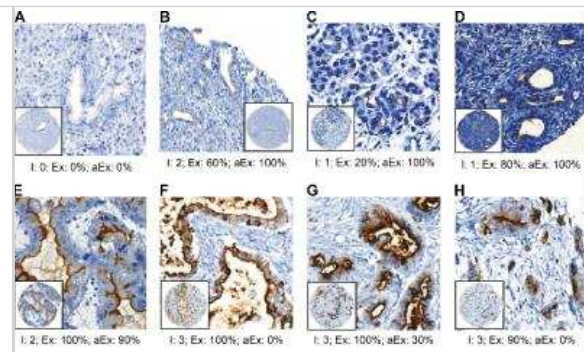
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry Free-Floating, Knockdown Validated
Recommended Dilutions	Western Blot 0.04 - 0.4 ug/ml, Immunohistochemistry 1:500 - 1:1000, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunohistochemistry-Paraffin 1:500 - 1:1000, Immunohistochemistry Free-Floating 1:1000 - 1:2500, Knockdown Validated
Application Notes	For IHC-Paraffin, HIER pH 6 retrieval is recommended. ICC/IF Fixation Permeabilization: Use PFA/Triton X-100.

**Images**

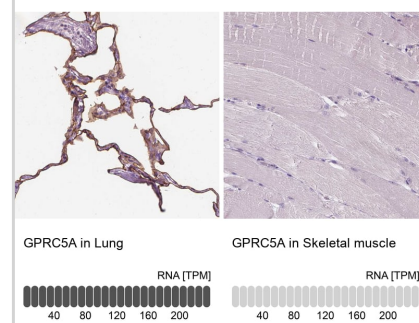
Immunocytochemistry/Immunofluorescence: GPRC5A/RAI3 Antibody [NBP1-89743] - Staining of human cell line U-2 OS shows localization to nucleoli, plasma membrane & vesicles. Antibody staining is shown in green.



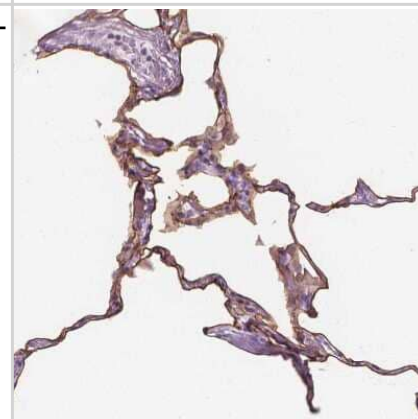
Immunohistochemistry Free-Floating: GPRC5A/RAI3 Antibody [NBP1-89743] - Expression of RAI3 in human tissue and cell lines. Immunohistochemistry with RAI3-Antibody in different types of pancreatic tissue. Presentation in 20-fold magnification of A-C: Normal; D: Chronic pancreatitis (CP), E: Intraductal Papillary Mucinous Neoplasm (IPMN); F-H: Pancreatic Ductal Adenocarcinoma (PDAC). (PLoS One. 2017; 12 (1): e0170390. Published online 2017 Jan 23.)



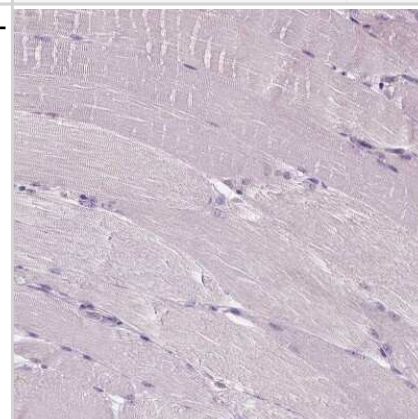
Analysis in human lung and skeletal muscle tissues using NBP1-89743 antibody. Corresponding GPRC5A RNA-seq data are presented for the same tissues.



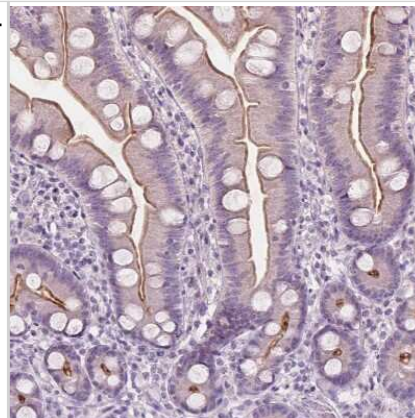
Immunohistochemistry-Paraffin: GPRC5A/RAI3 Antibody [NBP1-89743] - Staining of human lung shows moderate membranous positivity in pneumocytes.



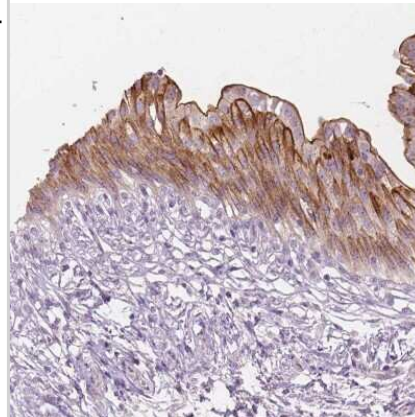
Immunohistochemistry-Paraffin: GPRC5A/RAI3 Antibody [NBP1-89743] - Staining of human skeletal muscle shows no positivity in myocytes as expected.



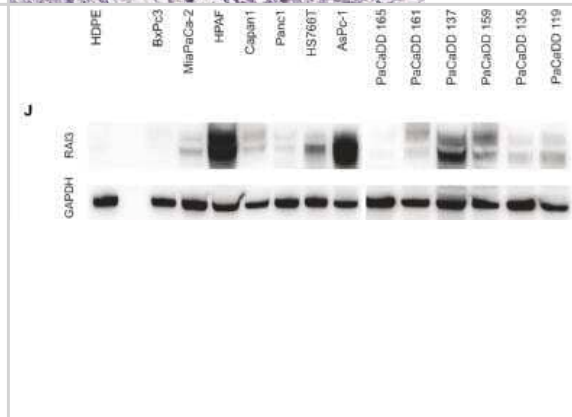
Immunohistochemistry-Paraffin: GPRC5A/RAI3 Antibody [NBP1-89743] - Staining of human small intestine shows moderate positivity in apical membrane in glandular cells.



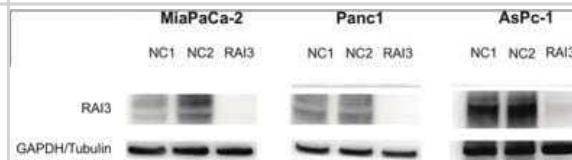
Immunohistochemistry-Paraffin: GPRC5A/RAI3 Antibody [NBP1-89743] - Staining of human urinary bladder shows moderate membranous positivity in urothelial cells.



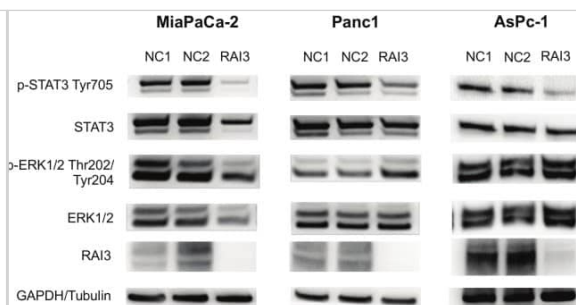
Western Blot: GPRC5A/RAI3 Antibody [NBP1-89743] - (J) RAI3 has a conspicuously low expression in BxPc3 and PaCaDD165 in comparison to the other cell lines in the group. (n = 3). (PLoS One. 2017; 12 (1): e0170390. Published online 2017 Jan 23.)



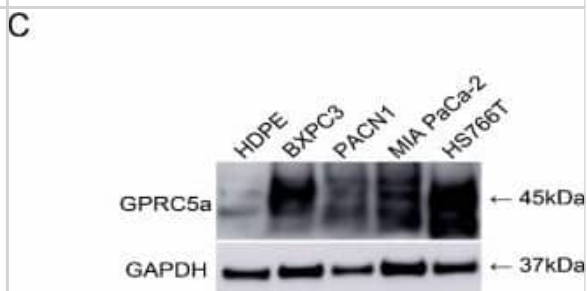
Western Blot: GPRC5A/RAI3 Antibody [NBP1-89743] - Western Blot: Pancreatic cell lines, where NC1 and NC2 represent negative controls.



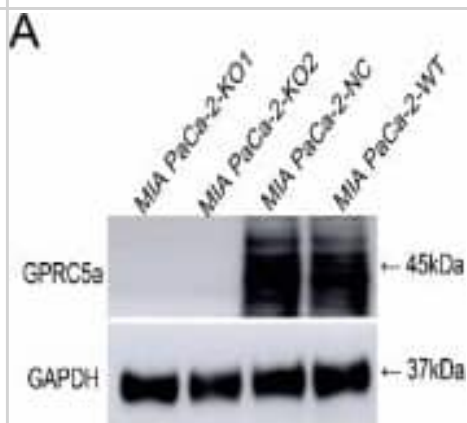
Western Blot analysis of different pathways were tested for alteration in knock-down with GPRC5A siRNA in comparison to negative control. Phosphorylation of STAT3 at Tyr705 is reduced in knock-down of all three cell lines, whereas Phospho-ERK is not changed significantly (see S2 Fig for original Western blot images). (n = 3).



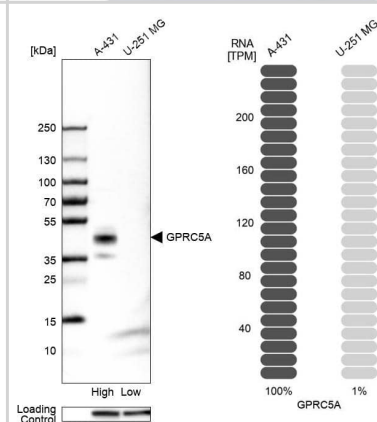
Western Blot: GPRC5A/RAI3 Antibody [NBP1-89743] - GPRC5a expression levels in normal pancreas & PaCa (PAAD) tissue & cell lines. (A,B) The data-mining analysis showed that GPRC5a was significantly upregulated in PaCa (PAAD) samples with an association of increased expression in higher malignant tumor stages ( $p < 0.05$ ). (C,D) The Western blot & qPCR results showed that the basic protein-level expression of GPRC5a in PaCa cell lines was higher than that in the HPDEE6E7 pancreas cell line. (E) Immunofluorescence assay showed upregulated expression of GPRC5a in PaCa cell lines (200 $\times$ ). The error bars were from multiple samples (n) measurement results (A,B) or three experimental measurements (C,D). \*  $p$ -value  $< 0.05$ . Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29949874>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: GPRC5A/RAI3 Antibody [NBP1-89743] - Influence of GPRC5a knockout on the proliferation & migration ability in MIA PaCa-2 & TB32047 cells. (A–D) Western blot & sequencing results showing the GPRC5a knocked out in MIA PaCa-2-KO1/2 & TB32047-KO1/2 (Red highlight area means the different part in comparison of sequencing sequence). (E,F): The knockout of GPRC5a inhibited the proliferation ability of MIA PaCa-2 & TB32047 cells. (G,H) GPRC5a knockout inhibited the migration ability of MIA PaCa-2 (G) & TB32047 cells (H). \*  $p$ -value  $< 0.05$ . Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29949874>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Analysis in human cell lines A-431 and U-251MG using Anti-GPRC5A antibody. Corresponding GPRC5A RNA-seq data are presented for the same cell lines. Loading control: Anti-HSP90B1.



## Publications

Liu B, Yang H, Pilarsky C, Weber GF. The Effect of GPRC5a on the Proliferation, Migration Ability, Chemotherapy Resistance, and Phosphorylation of GSK-3B in Pancreatic Cancer. *Int J Mol Sci.* 2018-06-26 [PMID: 29949874] (ICC/IF, WB, Human)

Jahny E, Yang H, Liu B et al. The G Protein-Coupled Receptor RAI3 Is an Independent Prognostic Factor for Pancreatic Cancer Survival and Regulates Proliferation via STAT3 Phosphorylation *PLoS ONE* 2017-01-23 [PMID: 28114355] (WB, Human)





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### **Products Related to NBP1-89743**

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NBP1-89743PEP	GPRC5A/RAI3 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.

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