# Product Datasheet

## Rab13 Antibody - BSA Free
## NBP1-85799

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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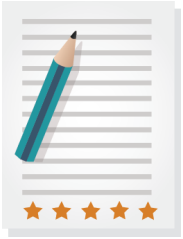
**Publications: 5**

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NBP1-85799

Updated 2/21/2025 v.20.1





# NBP1-85799

Rab13 Antibody - BSA Free

## Product Information

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|---|---|
| **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

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| **Host** | Rabbit |
| **Gene ID** | 5872 |
| **Gene Symbol** | RAB13 |
| **Species** | Human, Mouse |
| **Reactivity Notes** | Use in Mouse reported in scientific literature (PMID:31290739). |
| **Immunogen** | This antibody was developed against Recombinant Protein corresponding to amino acids: AMGIILVYDITDEKSFENIQNWMKSIKENASAGVERLLLGNKCDMEAKRKVQKE QADKLAREHGIRFFETSAKSSMNVDEAFSSLARDILLKSGGRRSGNGNKPPST DLKTCDKKNTNKCS |

## Product Application Details

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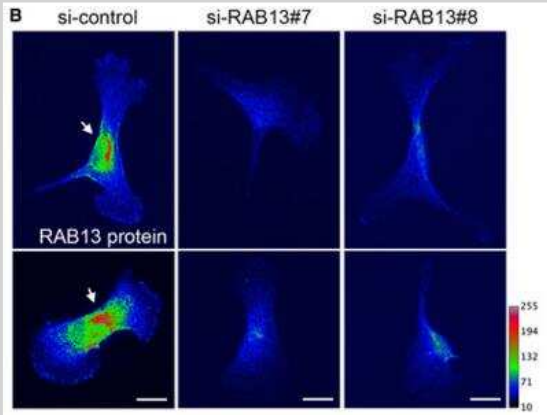
| **Applications** | Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Proximity Ligation Assay, Knockdown Validated |
| **Recommended Dilutions** | Western Blot 0.04-0.4 ug/ml, Immunohistochemistry 1:50 - 1:200, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunohistochemistry-Paraffin 1:50 - 1:200, Proximity Ligation Assay Reported in scientific literature (PMID:31290739), 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: Rab13 Antibody [NBP1-85799] - Representative immunofluorescence images of RAB13 protein in cells transfected with the indicated siRNAs. Reduction of intensity in RAB13 knockdown cells confirms the specificity of the signal. Arrows point to perinuclear RAB13 protein. Image collected and cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32946136) licensed under a CC-BY license.



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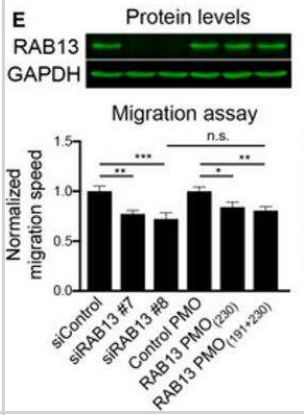
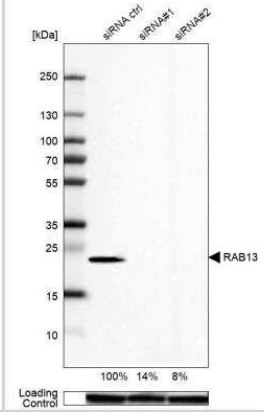
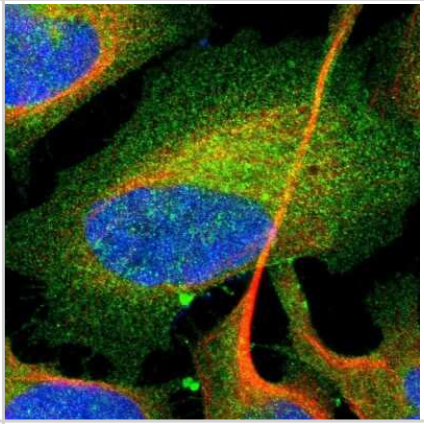
|---|---|
| Western Blot: Rab13 Antibody [NBP1-85799] - Cells treated with the indicated PMOs or siRNAs were analyzed by Western blot (upper panels) to detect RAB13 and GAPDH protein levels. Migration speed was assessed as in (B) from n = 55-78 cells (bottom graph). Bars: mean +/- s.e.m. Image collected and cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32946136) licensed under a CC-BY license. |  |
| Western Blot: Rab13 Antibody [NBP1-85799] - Analysis in U-87MG ATCC cells transfected with control siRNA, target specific siRNA probe #1 and #2, using Anti-RAB13 antibody. Remaining relative intensity is presented. Loading control: Anti-GAPDH. |  |
| Immunocytochemistry/Immunofluorescence: Rab13 Antibody [NBP1-85799] - Staining of human cell line U-2 OS shows localization to plasma membrane and cytosol. Antibody staining is shown in green. |  |
| Immunohistochemistry-Paraffin: Rab13 Antibody [NBP1-85799] - Staining of human testis shows moderate membranous positivity in cells in seminiferous ducts. | |

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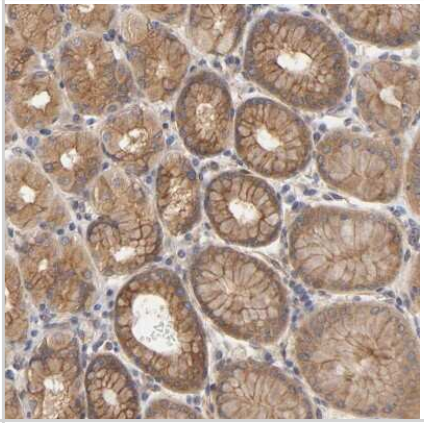
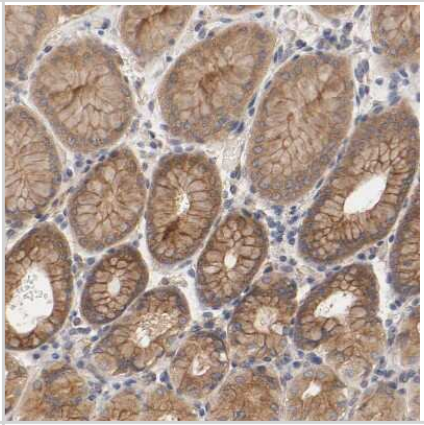
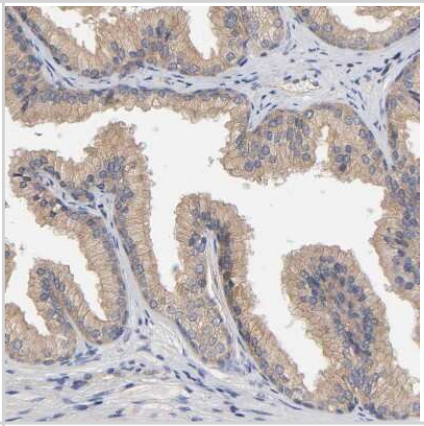
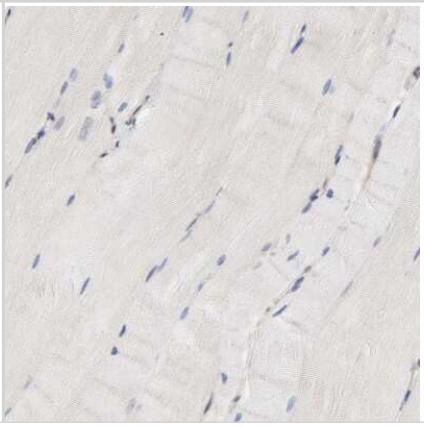
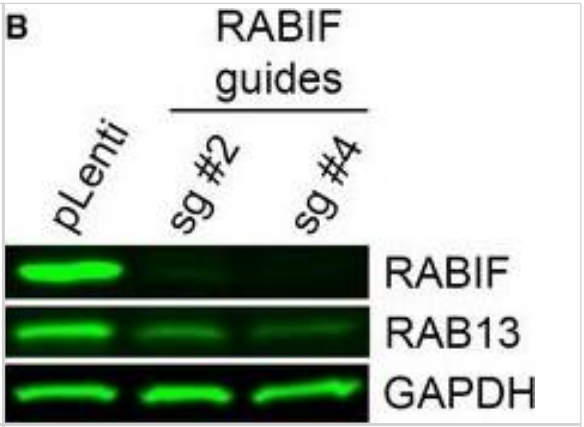
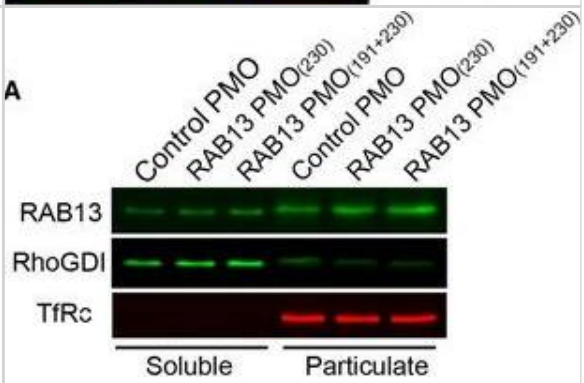
| Immunohistochemistry-Paraffin: Rab13 Antibody [NBP1-85799] - Staining of human stomach shows moderate cytoplasmic positivity in glandular cells. |  |
| Immunohistochemistry-Paraffin: Rab13 Antibody [NBP1-85799] - Staining of human stomach shows moderate membranous positivity in glandular cells. |  |
| Immunohistochemistry-Paraffin: Rab13 Antibody [NBP1-85799] - Staining of human prostate shows weak membranous positivity in glandular cells. |  |
| Immunohistochemistry-Paraffin: Rab13 Antibody [NBP1-85799] - Staining of human skeletal muscle shows no positivity in myocytes as expected. |  |

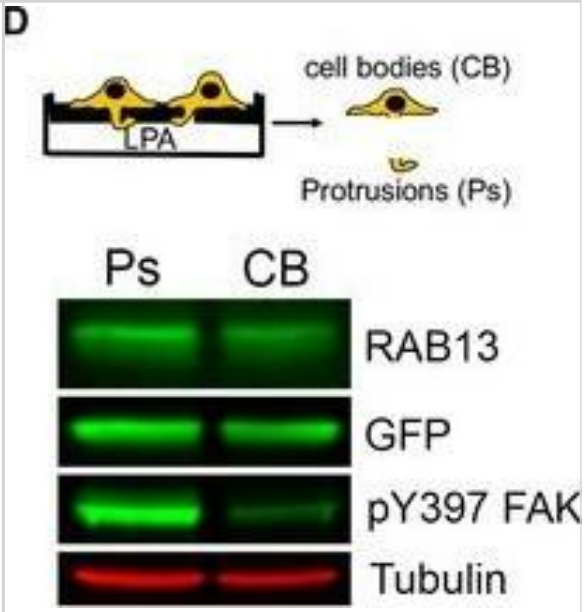
Western Blot: Rab13 Antibody [NBP1-85799] - RABIF distribution & effect on RAB13 expressionRepresentative immunofluorescence images of RABIF protein in cells transfected with the indicated siRNAs. Reduction of intensity in knockdown cells confirms the specificity of the signal. Calibration bar shows intensity values. Note that RABIF exhibits a mostly perinuclear enrichment.RAB13 expression in cells with CRISPR knockdown of RABIF using the indicated sgRNAs (see also Fig 7C). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32946136), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



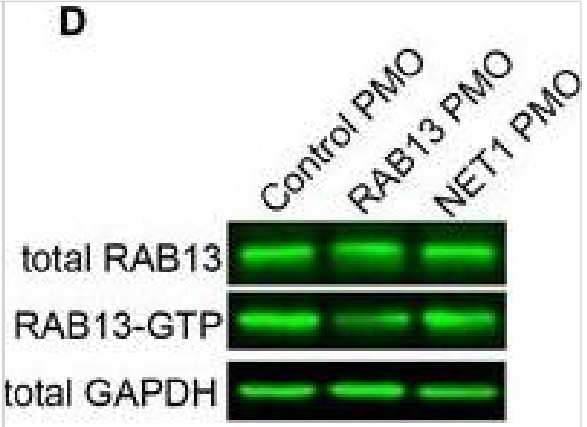

Western Blot: Rab13 Antibody [NBP1-85799] - RAB13 RNA mislocalization does not affect RAB13 binding to membranes or association with REP□1 or RabGDICells treated with the indicated PMOs were fractionated into soluble & particulate fractions, & the indicated proteins were detected by Western blot. RhoGDI & TfRc serve as soluble & particulate markers, respectively.Lysates from the indicated GFP or GFP□RAB13□expressing cell lines were immunoprecipitated with anti□GFP antibodies & blotted to detect the indicated proteins. Relative REP□1 & RabGDI binding are quantified in the graphs from n = 3 (REP□1) & n = 5 (RabGDI) independent experiments. Bars: mean ± s.e.m. No significant differences were detected by Wilcoxon matched□pairs signed□rank test. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32946136), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



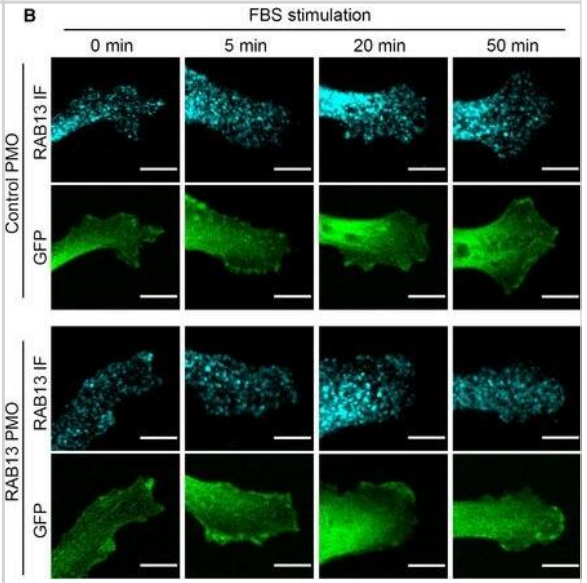

Western Blot: Rab13 Antibody [NBP1-85799] - RAB13 RNA & protein exhibit distinct subcellular distributionsRepresentative FISH images showing RAB13 RNA distribution in MDA□MB-231 cells. Nuclei & cell outlines are shown in blue & green, respectively. Arrows point to RAB13 RNA concentrated at protrusive regions. Boxed regions are magnified in the insets.Representative immunofluorescence images of RAB13 protein in cells transfected with the indicated siRNAs. Reduction of intensity in RAB13 knockdown cells confirms the specificity of the signal. Arrows point to perinuclear RAB13 protein. Calibration bar shows intensity values.Ratios of peripheral/perinuclear intensity calculated from images as shown in (A) & (B). Bars: mean ± s.e.m. Values within each bar represent number of cells observed in 3 independent experiments.Protrusions (Ps) & cell bodies (CB) of cells induced to migrate toward LPA were isolated & analyzed to detect the indicated proteins (by Western blot; left panels) or RNAs (by RT□ddPCR; right panel). Ps/CB enrichment ratios from 2 independent experiments are shown. Bars: mean ± s.e.m. The enrichment of pY397□FAK serves to verify the enrichment of protrusions containing newly formed adhesions in the Ps fraction.Data information: P□values: **< 0.01; ****< 0.0001 by Student's t□test (C) or analysis of variance with Dunnett's multiple comparisons test against GFP (D). Scale bars: 10 μm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32946136), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: Rab13 Antibody [NBP1-85799] - Peripheral RAB13 RNA translation is required for RAB13 protein activation but not steady□state distribution or membrane associationAWide□field images of RAB13 immunofluorescence in MDA□MB-231 cells treated with control or RAB13 (191 + 230) PMOs & ratios of peripheral/perinuclear intensity. Scale bars: 10 μm. n = 45–50 cells. Bars: mean ± s.e.m. Similar results were observed in two additional independent experiments.BFluorescence images (projections of confocal slices throughout the cell height) of cells expressing GFP□RAB13 with the indicated UTRs. Note that in both cases the protein assumes indistinguishable distribution. Scale bars: 10 μm.CSoluble/particulate fractionation of the indicated cell lines followed by Western blot to detect the indicated proteins. RhoGDI & TfRc serve as soluble & particulate markers, respectively. Graph shows quantitation from n = 3 independent experiments. Bars: mean ± s.e.m.D, EActive RAB13 (RAB13□GTP) was pulled down using MICAL□L1 RBD□GST from the indicated PMO□treated cells (D) or GFP□RAB13□expressing lines (E). The amount of endogenous or exogenous RAB13 was measured by quantitative Western blot, & relative levels of active RAB13 are plotted. n = 8 (D), n = 4 (E). Bars: mean ± s.e.m.Data information: P□values: *< 0.05, **< 0.01 by Kruskal–Wallis test.Source data are available online for this figure. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32946136), licensed under a CC-BY license. Not internally tested by Novus Biologicals.




Immunocytochemistry/ Immunofluorescence: Rab13 Antibody [NBP1-85799] - RAB13 protein levels do not change upon serum stimulationMDA□MB□231 cells were stimulated with serum for the indicated times, in the presence or absence of cycloheximide (CHX). The cells were also treated with control or RAB13□mislocalizing PMOs.Representative Western blot analysis of whole□cell lysates & corresponding quantitations of RAB13 levels from n = 4–5 replicates. Bars: mean ± s.e.m. No significant differences by Friedman's test. Increase in pY397□FAK levels attests to serum stimulation.RAB13 immunofluorescence at representative protrusive regions. A cell line expressing GFP was used to delineate cell borders & provide an internal cytosolic control. RAB13 signal at front lamellipodial regions was quantified. n = 35–51 protrusions. Bars: mean ± s.e.m. No increase is detected upon stimulation. By contrast, at early time points a decrease is detected (5 & 20 min, P < 0.01 by Kruskal–Wallis test), potentially arising from serum□induced endocytosis of RAB13□containing membranes. Scale bars: 8 μm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32946136), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: Rab13 Antibody [NBP1-85799] - RAB13 protein levels do not change upon serum stimulationMDA□MB□231 cells were stimulated with serum for the indicated times, in the presence or absence of cycloheximide (CHX). The cells were also treated with control or RAB13□mislocalizing PMOs.Representative Western blot analysis of whole□cell lysates & corresponding quantitations of RAB13 levels from n = 4–5 replicates. Bars: mean ± s.e.m. No significant differences by Friedman's test. Increase in pY397□FAK levels attests to serum stimulation.RAB13 immunofluorescence at representative protrusive regions. A cell line expressing GFP was used to delineate cell borders & provide an internal cytosolic control. RAB13 signal at front lamellipodial regions was quantified. n = 35–51 protrusions. Bars: mean ± s.e.m. No increase is detected upon stimulation. By contrast, at early time points a decrease is detected (5 & 20 min, P < 0.01 by Kruskal–Wallis test), potentially arising from serum□induced endocytosis of RAB13□containing membranes. Scale bars: 8 µm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32946136), licensed under a CC-BY license. Not internally tested by Novus Biologicals.


## Publications

Moissoglu K, Stueland M, Gasparski AN et al. RNA localization and co-translational interactions control RAB13 GTPase function and cell migration EMBO J. 2020-09-18 [PMID: 32946136] (ICC/IF, WB, Human)

Translational regulation of protrusion-localized RNAs involves silencing and clustering after transport Moissoglu K, Yasuda K, Wang T et al. Elife [PMID: 31290739] (PLA, WB, Mouse)

Eaton A Effects of Stretch on the Bladder Umbrella Cell Apical Junctional Ring Thesis 2020-01-01 (WB, Rat)

Eaton AF, Clayton DR, Ruiz WG et al. Expansion and Contraction of the Umbrella Cell Apical Junctional Ring in Response to Bladder Filling and Voiding Mol. Biol. Cell 2019-06-05 [PMID: 31166831]

Abou-Zeid N, Pandjaitan R, Sengmanivong L et al. MICAL-like1 mediates epidermal growth factor receptor endocytosis. Mol Biol Cell 2011-09-01 [PMID: 21795389]

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## Products Related to NBP1-85799

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|---|---|
| NBP1-85799PEP | Rab13 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 |

### 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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