

Product Datasheet

RASAL1 Antibody - BSA Free

NBP1-32776

Unit Size: 100 ul

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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NBP1-32776

RASAL1 Antibody - BSA Free

Product Information

Unit Size	100 ul
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.01% Thimerosal
Isotype	IgG
Purity	Antigen Affinity-purified
Buffer	0.1M Tris (pH 7), 0.1M Glycine, 10% Glycerol
Target Molecular Weight	90 kDa

Product Description

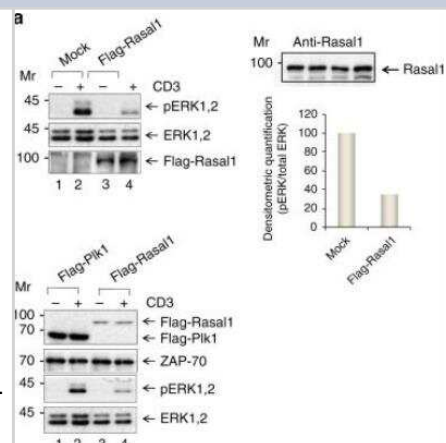
Host	Rabbit
Gene ID	8437
Gene Symbol	RASAL1
Species	Human, Monkey
Reactivity Notes	Mouse reactivity reported in scientific literature (PMID: 31641113). Monkey reactivity reported from a verified customer review.
Immunogen	Recombinant protein encompassing a sequence within the C-terminus region of human RASAL1. The exact sequence is proprietary.

Product Application Details

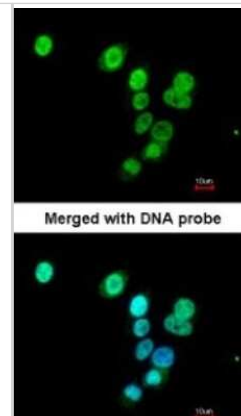
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Proximity Ligation Assay, Knockdown Validated
Recommended Dilutions	Western Blot 1:500-1:3000, Immunocytochemistry/ Immunofluorescence 1:100-1:1000, Proximity Ligation Assay, Knockdown Validated
Application Notes	RASAL1 antibody validated for WB from a verified customer review. Use in Proximity Ligation Assay reported in scientific literature (PMID:31641113).

Images

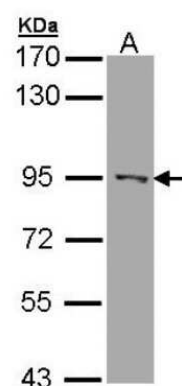
Western Blot: RASAL1 Antibody [NBP1-32776] - Rasal1 inhibits the ERK1/2 pathway, but not p38 pathway. Expression of Rasal1 in T cells inhibits ERK1,2 phosphorylation. Upper and lower panels: two independent experiments where primary mouse T cells were transfected with Flag-tagged Rasal1 and were ligated with anti-CD3 for 5 min followed by blotting with anti-phospho-p44/42 MAPK (Erk1/2) (Thr202/Tyr204); anti-ERK1/2, anti-ZAP-70 or anti-Flag. Flag-PLK expression served as a negative control (top panel) (n > 2). Upper right panel shows endogenous levels of Rasal1 in activated primary T cells. Lower right panel: histogram showing the inhibition of pERK relative to ERK expression. Image collected and cropped by CiteAb from the following publication (<https://www.nature.com/articles/s41467-019-12544-4>) licensed under a CC-BY license.



Immunocytochemistry/Immunofluorescence: RASAL1 Antibody [NBP1-32776] - Paraformaldehyde-fixed A549, using antibody at 1:200 dilution.

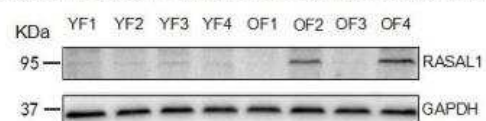


Western Blot: RASAL1 Antibody [NBP1-32776] - Sample (30 ug of whole cell lysate) A: A431 7.5% SDS PAGE, antibody diluted at 1:1000.

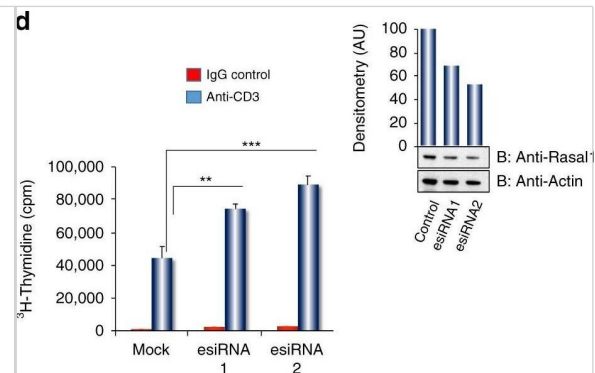


Western Blot: RASAL1 Antibody [NBP1-32776] - Protein expression was upregulated in older female crab-eating monkey brain. Image submitted by a verified customer review.

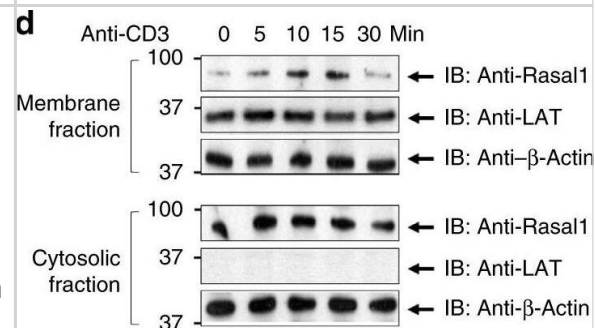
WB test of RASAL1 in female crab-eating monkey brain



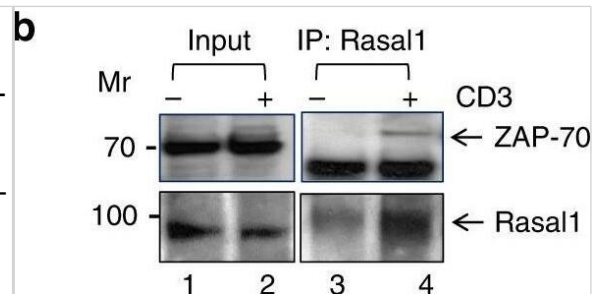
Western Blot: RASAL1 Antibody [NBP1-32776] - Rasal1 inhibits in vitro anti-CD3 & dendritic cell-peptide induced T-cell activation. **a** Antigen (OVA323-39)-dependent activation & proliferation of DO11.10 CD4⁺ cells expressing Flag-tagged Rasal1 compared with control cells at different OVA peptide concentrations (5–10 ng). CTLA-Ig was used as a control. Upper inset shows expression of Flag-tagged Rasal1 using anti-Flag in blotting (n = 3). **b** Inhibition of T-cell responses by Rasal1 to increasing anti-CD3 concentrations. Upper inset: effects of Rasal1 at 48 & 72 h post-anti-CD3 activation (n = 3). **c** Anti-CD3-driven NFATc1/AP1 promoter activity in Jurkat T cells was inhibited by the presence of Flag-tagged Rasal1 (n = 3). **d** siRNA (esiRNA) knockdown of Rasal1 enhances T-cell proliferation. esiRNA were tested for their knockdown efficiency by western blot (top right panel), esiRNA1 & 2 correspond to 500 nM & 1000 nM concentrations (n = 3). **e** Contact time between DO11.10 CD4⁺T-cells expressing Flag-Rasal1 (red) or empty vector (blue) & OVA peptide on bone marrow dendritic cells (BMDCs). Dot blot of T cell/DC contact duration time in presence of OVA was unaffected by Flag-tagged Rasal1 or vector transfection (n = 3). Representative plots show mean with \pm SD. p-value was calculated by unpaired t test. *p < 0.05, **p < 0.01, ***p < 0.001 Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/31641113>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



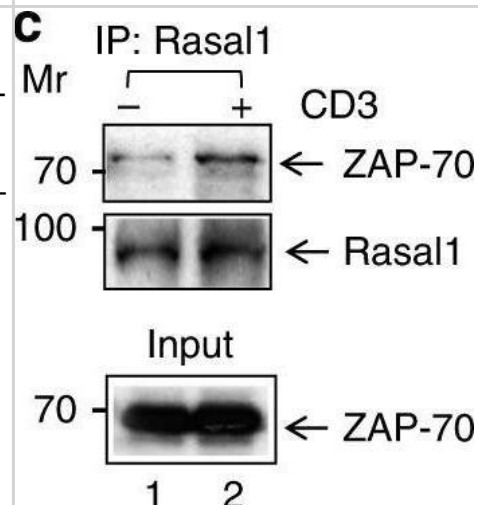
Western Blot: RASAL1 Antibody [NBP1-32776] - TCR complex purification & Rasal1 association with ZAP-70 in the TCR complex. **a** Analytic gel from tandem affinity purification (TAP) of TCR plus associated proteins captured from TCR-constituted cells (TCR complex) versus TCR-null negative control cells (control) (left panel). Chart showing the list of TCR-associated proteins identified by MS analysis (right upper panel). The structure of Rasal1 (right lower panel). **b** Co-precipitation of ZAP-70 with TCR from 3A9 T cells. 3A9 cells were stimulated for 10 min with anti-CD3 followed by immunoprecipitation with anti-TCR zeta & blotting with anti-ZAP-70 or anti-zeta. Lane 1: resting T cells; lane 2: anti-CD3-stimulated T cells. **c** Rasal1 expression is induced with anti-CD3 activation. Relative fold change expression of Rasal1 versus Rasal3 upon anti-CD3 stimulation of CD4⁺ & CD8⁺ peripheral T cells. 18 s rRNA served as a control. **d** Anti-CD3 induces Rasal1 translocation to the membranes of T cells. Stimulation-dependent association of Rasal1 with the membrane (upper panel) versus cytosolic Rasal1 (lower panel). Anti-actin served as a loading control. LAT was used as a marker of membrane enrichment fractionation (n = 3) Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/31641113>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: RASAL1 Antibody [NBP1-32776] - Rasal1 binds to the immune cell tyrosine kinase ZAP-70. a Proximity ligation assay (PLA) of Rasal1 & ZAP-70 in Jurkat T-cells stained with DAPI, anti-Rasal1, & anti-ZAP-70. Positive PLA signal (fluorescent dots) indicates a distance of 30–40 nm between Rasal1 & ZAP-70 in anti-CD3-activated T cells, indicating their close proximity (n = 2). b Anti-Rasal1 co-precipitates ZAP-70 from primary mouse T cells. Lane 1–2 loading controls, lanes 3–4: anti-Rasal1 IP: lanes 2 & 4. Cells were stimulated with anti-CD3 ligation for 5 min vs IgG control ligation in lanes 1 & 3. c Anti-Rasal1 co-precipitates ZAP-70 from transfected Jurkat T cells. Lanes 1: nonligated (i.e., IgG); lane 2: anti-CD3 ligated T cells for 5 min. Lower panel shows similar level of ZAP-70 expression in lysates of (n = 2) Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/31641113>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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Publications

M. H. S. Deurloo, S. Eide, E. Turlova, Q. Li, S. Spijker, H.-S. Sun, A. J. A. Groffen, Z.-P. Feng Rasal1 regulates calcium dependent neuronal maturation by modifying microtubule dynamics *Cell & Bioscience* 2024-01-21 [PMID: 38246997]

Thaker YR, Raab M, Strebhardt K et al. GTPase-activating protein Rasal1 associates with ZAP-70 of the TCR and negatively regulates T-cell tumor immunity *Nat Commun* 2019-10-22 [PMID: 31641113] (PLA, KD, WB, Mouse)



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HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
H00008437-P01-10ug	Recombinant Human RASAL1 GST (N-Term) Protein

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