Datasheet for ABIN967755

anti-GRB2 antibody (AA 1-217)

4 Images | 5 Publications

Go to Product page

Overview

Quantity:	150 µg
Target:	GRB2
Binding Specificity:	AA 1-217
Reactivity:	Human, Mouse, Rat, Dog, Chicken, Frog
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This GRB2 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunoprecipitation (IP), BioImaging (BI)

Product Details

Immunogen:	Rat GRB2 aa. 1-217
Clone:	81-GRB2
Isotype:	IgG1
Cross-Reactivity:	Chicken, Dog (Canine), Frog, Human, Mouse (Murine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. This antibody has been developed and certified for the bioimaging application. However, a routine bioimaging test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance. 4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive

Product Details

	deposits in plumbing. 5. Source of all serum proteins is from USDA inspected abattoirs located in the United States. 6. Triton is a trademark of the Dow Chemical Company.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	GRB2
Alternative Name:	GRB2 (GRB2 Products)
Background:	Growth-factor Receptor-Bound Protein 2 (GRB2) was isolated by using the EGF receptor C-terminus as a probe in the screening of lambdagt11 expression libraries. This 24 kDa GRB2 protein is ubiquitously expressed and consists of one SH2 domain flanked by two SH3 domains. Its ability to bind proteins through these domains has prompted much investigation of its role as an adaptor protein. Sos, a Ras GDP/GTP exchange protein, is constitutively bound to the SH3 domain of GRB2. Following growth factor stimulation, receptor tyrosine kinases autophosphorylate, creating a binding site for the GRB2 SH2 domain. Alternatively, GRB2 interacts with the receptor-bound active Shc protein.Through these interactions, the GRB2/Sos complex is translocated to the membrane where Sos activates membrane-bound Ras to initiate the Ras signaling pathway. Other proteins that similarly interact with GRB2 include Cbl, PTP1D, and Dynamin. However,the mechanisms through which these associations impact cellular responses remain to be discovered.
Molecular Weight:	24 kDa
Pathways:	RTK Signaling, TCR Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Regulation of Actin Filament Polymerization, Hepatitis C, Signaling Events mediated by VEGFR1 and VEGFR2, Signaling of Hepatocyte Growth Factor Receptor, EGFR Downregulation

Application Details

Application Notes:	Bioimaging 1. Seed the cells in appropriate culture medium at ~10,000 cells per well in an 96-well Imaging Plate and culture overnight. 2. Remove the culture medium from the wells, and fix the cells by adding 100 myl of Fixation Buffer to each well. Incubate for 10 minutes at room temperature (RT).

Application Details

	3. Remove the fixative from the wells, and permeabilize the cells using either 90% methanol, or Triton™ X-100: a. Add 100 myl of -20°C 90% methanol to each well and incubate for 5 minutes at RT. OR b. Add 100 myl of 0.1% Triton™ X-100 to each well and incubate for 5 minutes at RT. 4. Remove the permeabilization buffer, and wash the wells twice with 100 myl of 1× PBS. 5. Remove the PBS, and block the cells by adding 100 myl of to each well. Incubate for 30 minutes at RT. 6. Remove the blocking buffer and add 50 myl of the optimally titrated primary antibody (diluted in Stain Buffer) to each well, and incubate for 1 hour at RT. 7. Remove the primary antibody, and wash the wells three times with 100 myl of 1× PBS. 8. Remove the PBS, and add the second step reagent at its optimally titrated concentration in 50 myl to each well, and incubate in the dark for 1 hour at RT. 9. Remove the second step reagent, and wash the wells three times with 100 myl of 1× PBS. 10. Remove the PBS, and counter-stain the nuclei by adding 200 myl per well of 2 myg/ml Hoechst 33342 in 1× PBS to each well at least 15 minutes before imaging. 11. View and analyze the cells on an appropriate imaging instrument.
Comment:	Related Products: ABIN967389, ABIN968539
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

Product cited in:	Saucier, Papavasiliou, Palazzo, Naujokas, Kremer, Park: "Use of signal specific receptor tyrosine kinase oncoproteins reveals that pathways downstream from Grb2 or Shc are sufficient for cell transformation and metastasis." in: **Oncogene**, Vol. 21, Issue 12, pp. 1800-11, (2002) (PubMed).

Publications

Elowe, Holland, Kulkarni, Pawson: "Downregulation of the Ras-mitogen-activated protein kinase pathway by the EphB2 receptor tyrosine kinase is required for ephrin-induced neurite retraction. " in: **Molecular and cellular biology**, Vol. 21, Issue 21, pp. 7429-41, (2001) (PubMed).

Zeng, Sachdev, Yan, Chan, Trenkle, McClelland, Welsh, Wang: "Vav3 mediates receptor protein tyrosine kinase signaling, regulates GTPase activity, modulates cell morphology, and induces cell transformation." in: **Molecular and cellular biology**, Vol. 20, Issue 24, pp. 9212-24, (2000) (PubMed).

Miki, Miura, Matuoka, Nakata, Hirokawa, Orita, Kaibuchi, Takai, Takenawa: "Association of Ash/Grb-2 with dynamin through the Src homology 3 domain." in: **The Journal of biological chemistry**, Vol. 269, Issue 8, pp. 5489-92, (1994) (PubMed).

Lowenstein, Daly, Batzer, Li, Margolis, Lammers, Ullrich, Skolnik, Bar-Sagi, Schlessinger: "The SH2 and SH3 domain-containing protein GRB2 links receptor tyrosine kinases to ras signaling." in: **Cell**, Vol. 70, Issue 3, pp. 431-42, (1992) (PubMed).

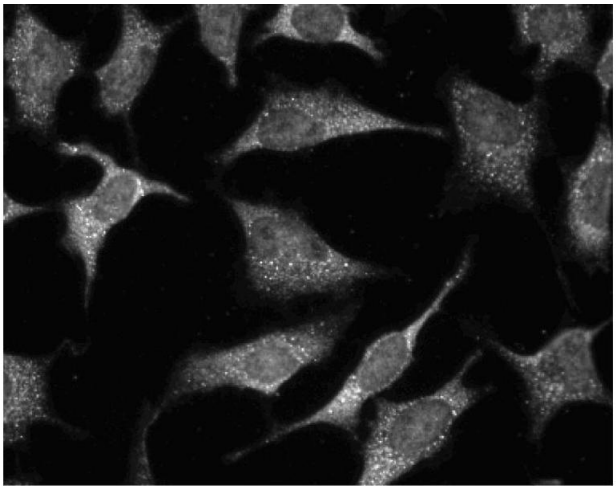
Images

Western Blotting

Image 1.

Western Blotting

Image 2. Western blot analysis of GRB2 on a PC-12 lysate (ABIN968539). Lane 1: 1:5000, lane 2: 1:10000, lane 3: 1:20000 dilution of the GRB2 antibody.



Immunofluorescence

Image 3. Immunofluorescent staining of HeLa (ATCC CCL-2) cells. Cells were seeded in a 96 well imaging plate at ~ 10 000 cells per well. After overnight incubation, cells were stained using the alcohol perm protocol and the anti-GRB2 antibody. The second step reagent was FITC goat anti mouse Ig. Images were taken on a BD Pathway™ 855 bioimager using a 20x objective. This antibody also stained A549 (ATCC CCL-185) and U-2 OS (ATCC HTB-96) cells and worked with both the Triton™ X-100 and alcohol perm protocols.

Please check the product details page for more images. Overall 4 images are available for ABIN967755.