

**GRB2 Antibody (Y209)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AW5382**

**Specification**

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**GRB2 Antibody (Y209) - Product Information**

|                   |  |
|-------------------|--|
| Application       | WB,E   |
| Primary Accession | <a href="#">P62993</a>   |
| Other Accession   | <a href="#">P62994</a> , <a href="#">Q60631</a> , <a href="#">Q07883</a> , <a href="#">Q6GPJ9</a> , <a href="#">P87379</a> |
| Reactivity        | Human, Rat   |
| Predicted         | Xenopus, Chicken, Mouse  |
| Host              | Rabbit   |
| Clonality         | Polyclonal   |
| Calculated MW     | H=25,21;M=25,21;R=25 KDa   |
| Isotype           | Rabbit IgG   |
| Antigen Source    | HUMAN  |

**GRB2 Antibody (Y209) - Additional Information**

**Gene ID** 2885

**Antigen Region**  
187-216

**Other Names**

Growth factor receptor-bound protein 2, Adapter protein GRB2, Protein Ash, SH2/SH3 adapter GRB2, GRB2, ASH

**Dilution**

WB~~1:1000

**Target/Specificity**

This GRB2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 187-216 amino acids from human GRB2.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

GRB2 Antibody (Y209) is for research use only and not for use in diagnostic or therapeutic procedures.

**GRB2 Antibody (Y209) - Protein Information**

**Name** GRB2

**Synonyms** ASH

### Function

Non-enzymatic adapter protein that plays a pivotal role in precisely regulated signaling cascades from cell surface receptors to cellular responses, including signaling transduction and gene expression (PubMed:<a href="http://www.uniprot.org/citations/11726515" target="\_blank">11726515</a>, PubMed:<a href="http://www.uniprot.org/citations/37626338" target="\_blank">37626338</a>). Thus, participates in many biological processes including regulation of innate and adaptive immunity, autophagy, DNA repair or necroptosis (PubMed:<a href="http://www.uniprot.org/citations/35831301" target="\_blank">35831301</a>, PubMed:<a href="http://www.uniprot.org/citations/37626338" target="\_blank">37626338</a>, PubMed:<a href="http://www.uniprot.org/citations/38182563" target="\_blank">38182563</a>). Controls signaling complexes at the T-cell antigen receptor to facilitate the activation, differentiation, and function of T-cells (PubMed:<a href="http://www.uniprot.org/citations/36864087" target="\_blank">36864087</a>, PubMed:<a href="http://www.uniprot.org/citations/9489702" target="\_blank">9489702</a>). Mechanistically, engagement of the TCR leads to phosphorylation of the adapter protein LAT, which serves as docking site for GRB2 (PubMed:<a href="http://www.uniprot.org/citations/9489702" target="\_blank">9489702</a>). In turn, GRB2 establishes a connection with SOS1 that acts as a guanine nucleotide exchange factor and serves as a critical regulator of KRAS/RAF1 leading to MAPKs translocation to the nucleus and activation (PubMed:<a href="http://www.uniprot.org/citations/12171928" target="\_blank">12171928</a>, PubMed:<a href="http://www.uniprot.org/citations/25870599" target="\_blank">25870599</a>). Functions also a role in B-cell activation by amplifying Ca(2+) mobilization and activation of the ERK MAP kinase pathway upon recruitment to the phosphorylated B-cell antigen receptor (BCR) (PubMed:<a href="http://www.uniprot.org/citations/25413232" target="\_blank">25413232</a>, PubMed:<a href="http://www.uniprot.org/citations/29523808" target="\_blank">29523808</a>). Plays a role in switching between autophagy and programmed necrosis upstream of EGFR by interacting with components of necrosomes including RIPK1 and with autophagy regulators SQSTM1 and BECN1 (PubMed:<a href="http://www.uniprot.org/citations/35831301" target="\_blank">35831301</a>, PubMed:<a href="http://www.uniprot.org/citations/38182563" target="\_blank">38182563</a>). Regulates miRNA biogenesis by forming a functional ternary complex with AGO2 and DICER1 (PubMed:<a href="http://www.uniprot.org/citations/37328606" target="\_blank">37328606</a>). Functions in the replication stress response by protecting DNA at stalled replication forks from MRE11-mediated degradation. Mechanistically, inhibits RAD51 ATPase activity to stabilize RAD51 on stalled replication forks (PubMed:<a href="http://www.uniprot.org/citations/38459011" target="\_blank">38459011</a>). Additionally, directly recruits and later releases MRE11 at DNA damage sites during the homology-directed repair (HDR) process (PubMed:<a href="http://www.uniprot.org/citations/34348893" target="\_blank">34348893</a>).

### Cellular Location

Nucleus. Cytoplasm. Endosome. Golgi apparatus {ECO:0000250|UniProtKB:Q60631}

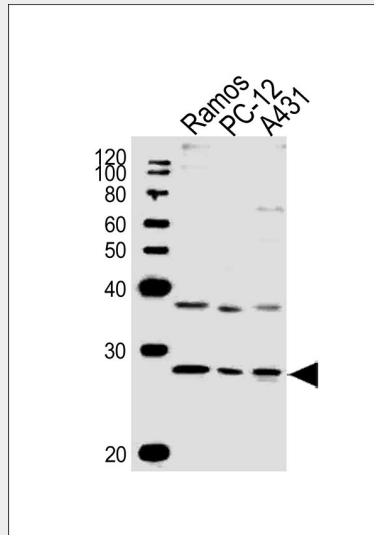
### GRB2 Antibody (Y209) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

### GRB2 Antibody (Y209) - Images



All lanes : Anti-GRB2 Antibody pY209 at 1:1000 dilution Lane 1: Ramos whole cell lysates Lane 2: PC-12 whole cell lysates Lane 3: A431 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 25 kDa Blocking/Dilution buffer: 5% NFDN/TBST.

### GRB2 Antibody (Y209) - Background

GRB2 binds the epidermal growth factor receptor and contains one SH2 domain and two SH3 domains. Its two SH3 domains direct complex formation with proline-rich regions of other proteins, and its SH2 domain binds tyrosine phosphorylated sequences. This gene is similar to the Sem5 gene of *C.elegans*, which is involved in the signal transduction pathway.

### GRB2 Antibody (Y209) - References

Kondo,A., J. Biol. Chem. 283 (3), 1428-1436 (2008) Morimatsu,M., Proc. Natl. Acad. Sci. U.S.A. 104 (46), 18013-18018 (2007) Martinez,N., Cell. Signal. 19 (11), 2277-2285 (2007)