

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

Specification

GRB2 Antibody (Y209) - Product Information

Application	WB,E
Primary Accession	P62993
Other Accession	P62994 , Q60631 , Q07883 , Q6GPJ9 , P87379
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:11726515, PubMed:37626338). Thus, participates in many biological processes including regulation of innate and adaptive immunity, autophagy, DNA repair or necroptosis (PubMed:35831301, PubMed:37626338, PubMed:38182563). Controls signaling complexes at the T-cell antigen receptor to facilitate the activation, differentiation, and function of T-cells (PubMed:9489702, PubMed:36864087). Mechanistically, engagement of the TCR leads to phosphorylation of the adapter protein LAT, which serves as docking site for GRB2 (PubMed:9489702). 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:12171928, PubMed:25870599). 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:25413232, PubMed:29523808). 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:35831301, PubMed:38182563). Regulates miRNA biogenesis by forming a functional ternary complex with AGO2 and DICER1 (PubMed:37328606). 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:38459011). Additionally, directly recruits and later releases MRE11 at DNA damage sites during the homology-directed repair (HDR) process (PubMed:34348893).

Cellular Location

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

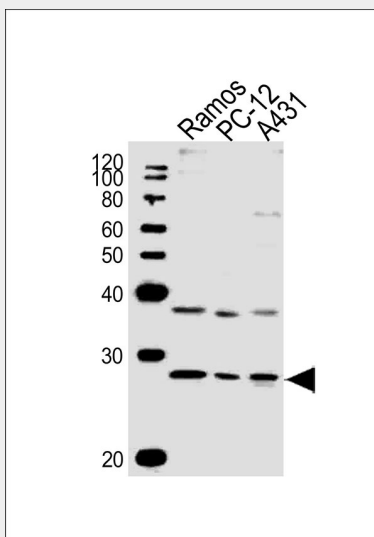
GRB2 Antibody (Y209) - Protocols

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)