

Anti-GRB2 Antibody
Rabbit polyclonal antibody to GRB2
Catalog # AP60465

Specification

Anti-GRB2 Antibody - Product Information

Application	WB
Primary Accession	P62993
Other Accession	Q60631
Reactivity	Human, Mouse, Rat, Zebrafish, Monkey, Pig, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	25206

Anti-GRB2 Antibody - Additional Information

Gene ID 2885

Other Names

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

Target/Specificity

Recognizes endogenous levels of GRB2 protein.

Dilution

WB~~WB (1/500 - 1/1000)

Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Anti-GRB2 Antibody - 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](http://www.uniprot.org/citations/11726515), PubMed: [37626338](http://www.uniprot.org/citations/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:36864087, PubMed:9489702). 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

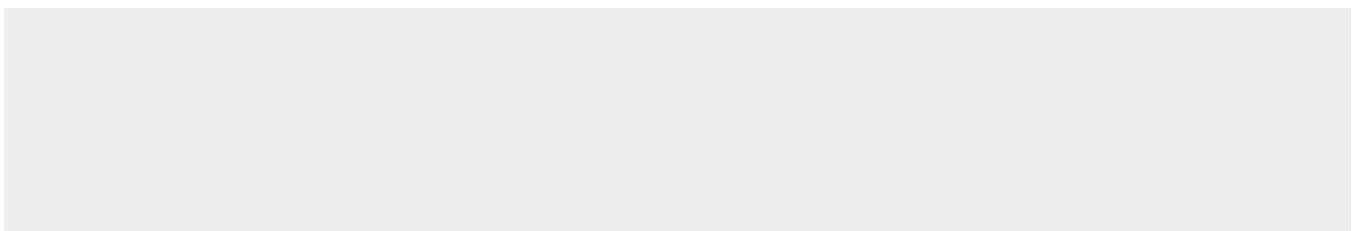
Nucleus. Cytoplasm. Endosome. Golgi apparatus {ECO:0000250|UniProtKB:Q60631}

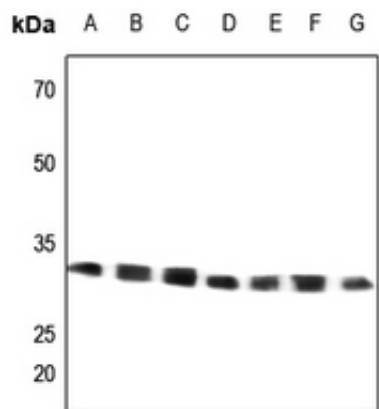
Anti-GRB2 Antibody - Protocols

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](#)

Anti-GRB2 Antibody - Images





Western blot analysis of GRB2 expression in HEK293T (A), HeLa (B), H1688 (C), mouse lung (D), mouse muscle (E), rat lung (F), rat muscle (G) whole cell lysates.

Anti-GRB2 Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human GRB2. The exact sequence is proprietary.