10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-GRB2 Antibody

Rabbit polyclonal antibody to GRB2
Catalog # AP60465

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

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

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: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 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).

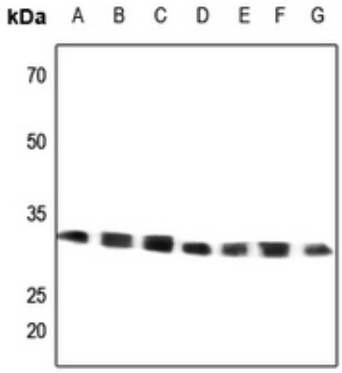
Cellular Location

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

Background

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

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.

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