

**GRB2 Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AP52729**

**Specification**

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**GRB2 Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">P62993</a>
Reactivity	<b>Human, Mouse</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG1</b>
Calculated MW	<b>25 KDa</b>

**GRB2 Antibody - Additional Information**

**Gene ID** 2885

**Other Names**

Abundant SRC homology; Adapter protein GRB2; ASH; Ash protein; EGFRBP GRB2; Epidermal growth factor receptor binding protein; Epidermal growth factor receptor binding protein GRB2; GRB 2; GRB2 adapter protein; Grb2; GRB2\_HUMAN; Grb3 3; Growth factor receptor bound protein 2; Growth factor receptor bound protein 3; Growth factor receptor-bound protein 2; HT027; MST084; MSTP084; NCKAP2; OTTHUMP00000166096; OTTHUMP00000166097; OTTHUMP00000166098; Protein ASH; SEM5; SH2/SH3 adapter GRB2.

**Dilution**

WB~~1:1000

**Format**

Purified mouse monoclonal antibody in PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.

**Storage**

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

**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:<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

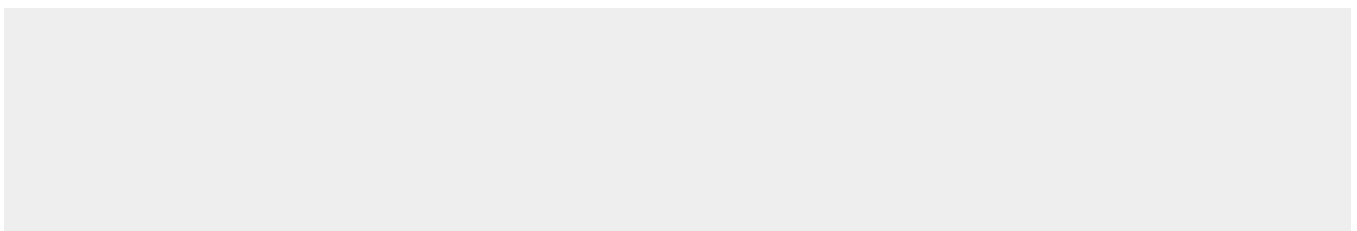
Nucleus. Cytoplasm. Endosome. Golgi apparatus {ECO:0000250|UniProtKB:Q60631}

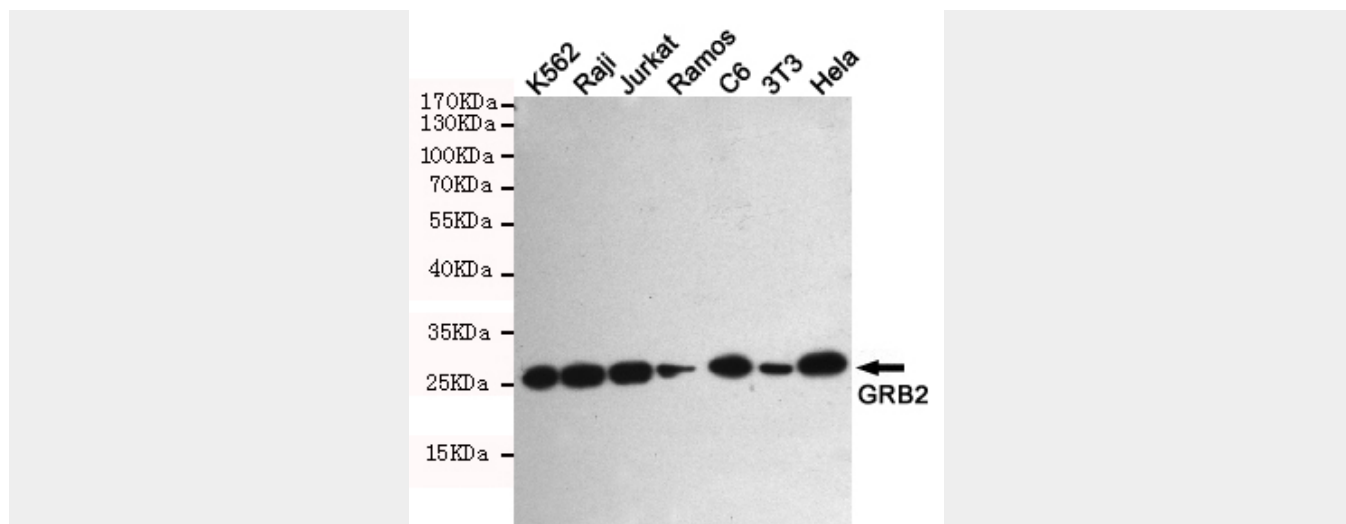
#### GRB2 Antibody - Protocols

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 - Images





Western blot detection of GRB2 in K562,Raji,Jurkat,Ramos,C6,3T3 and HeLa cell lysates using GRB2 mouse mAb (1:1000 diluted).Predicted band size:25KDa.Observed band size:25KDa.

### **GRB2 Antibody - Background**

Adapter protein that provides a critical link between cell surface growth factor receptors and the Ras signaling pathway.

### **GRB2 Antibody - References**

- Lowenstein E.J.,et al.Cell 70:431-442(1992).
- Matuoka K.,et al.Proc. Natl. Acad. Sci. U.S.A. 89:9015-9019(1992).
- Fath I.,et al.Science 264:971-974(1994).
- Bochmann H.,et al.Genomics 56:203-207(1999).
- Puhl H.L. III,et al.Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.