

**GRB2 Antibody**  
Rabbit mAb  
Catalog # AP93271

## Specification

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### GRB2 Antibody - Product Information

Application	WB, IHC, ICC
Primary Accession	<a href="#">P62993</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
ASH; EGFRBP GRB2; Grb2; Growth factor receptor bound protein 2; Growth factor receptor bound protein 3; HT027; NCKAP2; SEM5;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	25206 Da

### GRB2 Antibody - Additional Information

Purification	<b>Affinity-chromatography</b>
Immunogen	<b>A synthesized peptide derived from human GRB2</b>
Description	<b>Adapter protein that provides a critical link between cell surface growth factor receptors and the Ras signaling pathway. Isoform GRB3-3 does not bind to phosphorylated epidermal growth factor receptor (EGFR) but inhibits EGF-induced transactivation of a RAS-responsive element.</b>
Storage Condition and Buffer	<b>Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.</b>

### 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:<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/9489702" target="\_blank">9489702</a>, PubMed:<a href="http://www.uniprot.org/citations/36864087" target="\_blank">36864087</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