

**GRB2 Polyclonal Antibody**  
Catalog # AP70239**Specification****GRB2 Polyclonal Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P62993</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal

**GRB2 Polyclonal Antibody - Additional Information****Gene ID** 2885**Other Names**

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

**Dilution**

WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/40000. Not yet tested in other applications.

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**GRB2 Polyclonal 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](http://www.uniprot.org/citations/35831301), PubMed: [37626338](http://www.uniprot.org/citations/37626338), PubMed: [38182563](http://www.uniprot.org/citations/38182563)). Controls signaling complexes at the T-cell antigen receptor to facilitate the activation, differentiation, and function of T-cells (PubMed: [36864087](http://www.uniprot.org/citations/36864087), PubMed: [9489702](http://www.uniprot.org/citations/9489702)). 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**

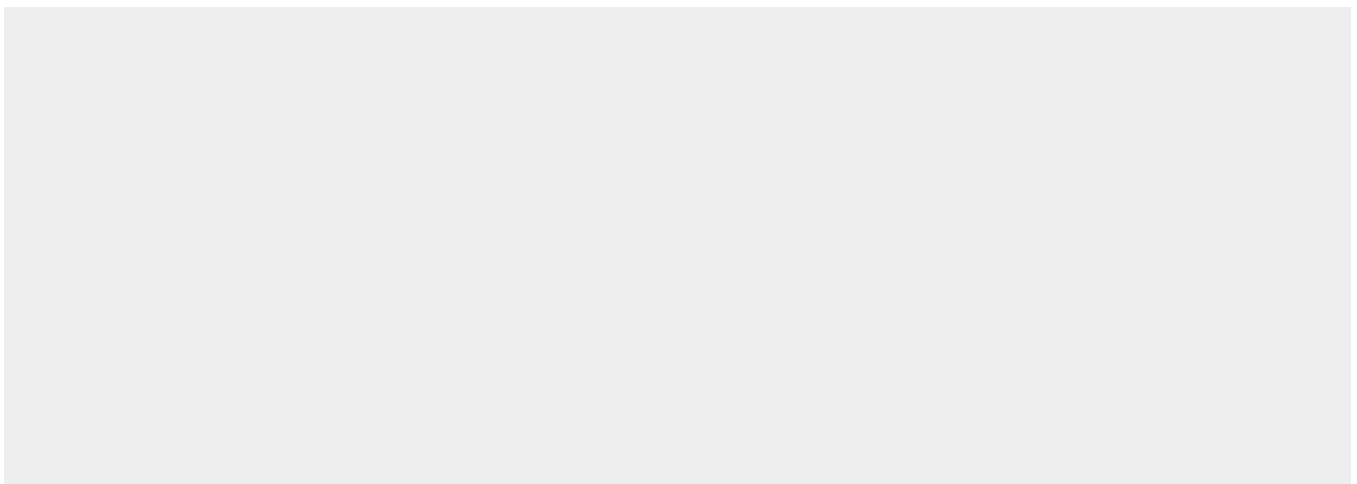
Nucleus. Cytoplasm. Endosome. Golgi apparatus {ECO:0000250|UniProtKB:Q60631}

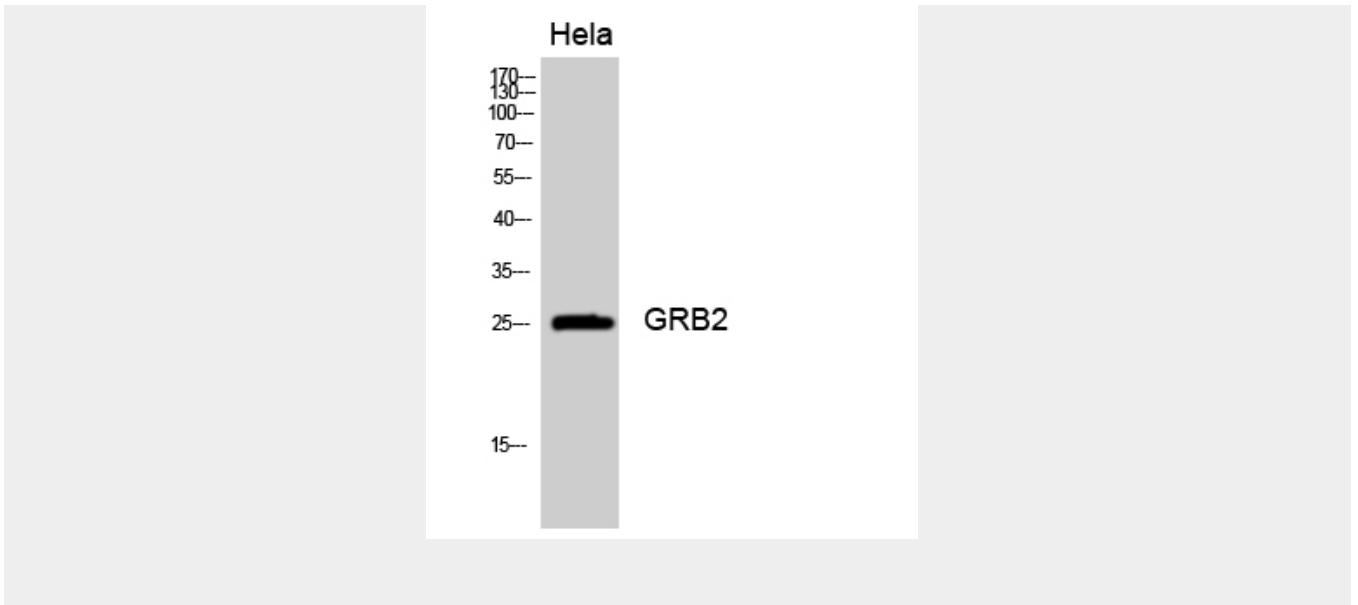
#### **GRB2 Polyclonal Antibody - Protocols**

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 Polyclonal Antibody - Images**





### GRB2 Polyclonal Antibody - Background

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