

## Anti-GRB2 Monoclonal Antibody Catalog # ABO14556

### Specification

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#### Anti-GRB2 Monoclonal Antibody - Product Information

Application	WB, IHC, IF, ICC, IP
Primary Accession	<a href="#">P62993</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

#### Description

Anti-GRB2 Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP applications. This antibody reacts with Human, Mouse, Rat.

#### Anti-GRB2 Monoclonal Antibody - Additional Information

Gene ID 2885

#### Other Names

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

#### Application Details

WB 1:500-1:2000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>IP 1:50

#### Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

#### Immunogen

A synthesized peptide derived from human GRB2 Adapter protein that provides a critical link between cell surface growth factor receptors and the Ras signaling pathway.

#### Purification

Affinity-chromatography

Storage

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

#### Anti-GRB2 Monoclonal 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

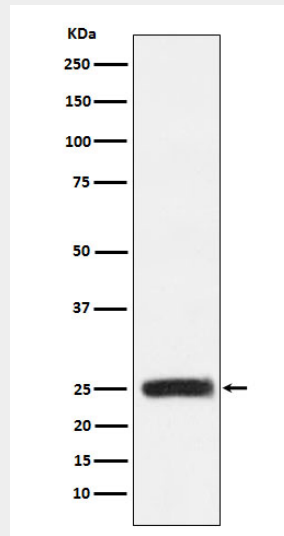
Nucleus. Cytoplasm. Endosome. Golgi apparatus {ECO:0000250|UniProtKB:Q60631}

## Anti-GRB2 Monoclonal 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 Monoclonal Antibody - Images



Western blot analysis of GRB2 expression in HEK293 cell lysate.