

GRB2 Antibody (C-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS13474**Specification**

GRB2 Antibody (C-Terminus) - Product Information

Application	IHC
Primary Accession	P62993
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	25kDa KDa

GRB2 Antibody (C-Terminus) - Additional Information**Gene ID** 2885**Other Names**

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

Target/Specificity

The polyclonal antibody recognizes Grb2, a highly conserved approximately 26 kD adaptor protein. The immunogen has 100% identity between man, cow, rat and mouse.

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions

GRB2 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

GRB2 Antibody (C-Terminus) - 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, 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 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}

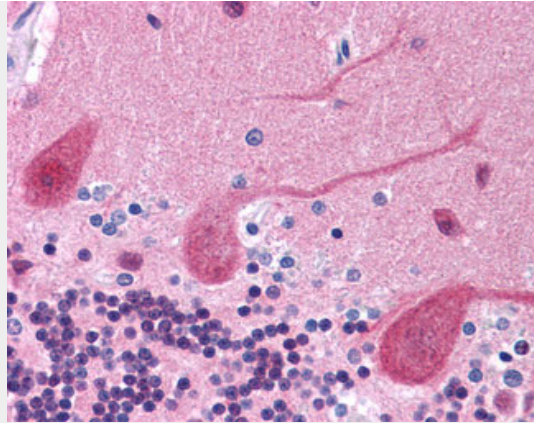
GRB2 Antibody (C-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

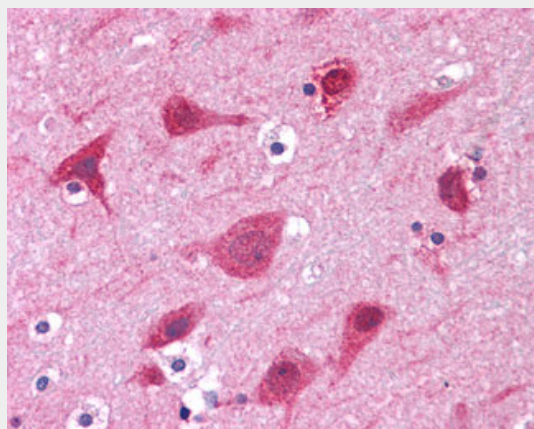
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GRB2 Antibody (C-Terminus) - Images

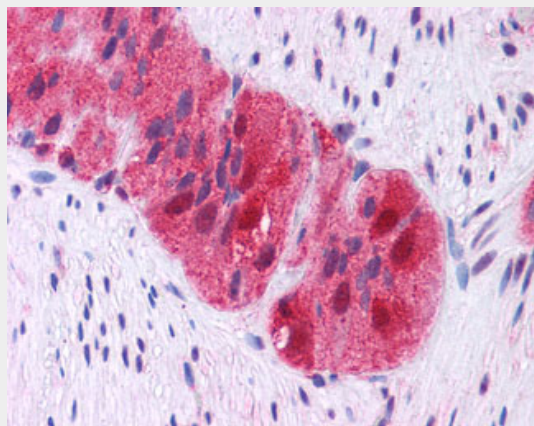




Anti-GRB2 antibody IHC of human brain, cerebellum.



Anti-GRB2 antibody IHC of human brain, cortex.



Anti-GRB2 antibody IHC of human colon, myenteric plexus.

GRB2 Antibody (C-Terminus) - Background

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

GRB2 Antibody (C-Terminus) - 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.