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GRB2 Antibody
Rabbit Polyclonal Antibody
Catalog # ALS13135

Specification

GRB2 Antibody - Product Information

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

GRB2 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

Target/Specificity
Human GRB2.

Reconstitution & Storage
Aliquot and store at -20°C. Minimize freezing and thawing.

Precautions
GRB2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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, PubMed:37626338). Thus, participates in many biological processes including regulation of innate and adaptive immunity, autophagy, DNA repair or necroptosis (PubMed:35831301, PubMed:37626338, PubMed:38182563). 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, 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 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}

Volume
50 µl

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 Cytomety
- Cell Culture

GRB2 Antibody - Images

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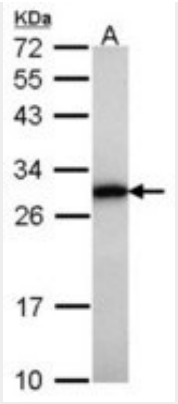
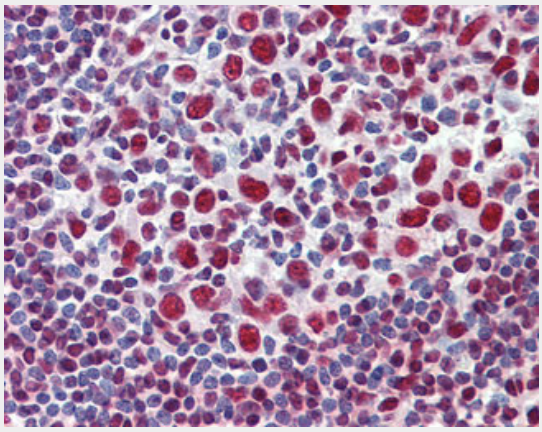
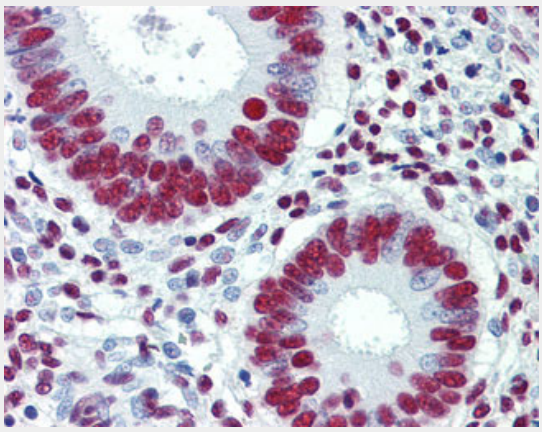


Sample (30 ug of whole cell lysate). A: Raji. 12% SDS PAGE. GRB2 antibody diluted at 1:1000.



Anti-GRB2 antibody IHC of human tonsil.



Anti-GRB2 antibody IHC of human uterus.

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.