

KD-Validated Anti-Growth factor receptor bound protein 2 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1558**Specification****KD-Validated Anti-Growth factor receptor bound protein 2 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC
Primary Accession	P62993
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 25 kDa , observed , 25 kDa KDa
Gene Name	GRB2
Aliases	GRB2; Growth Factor Receptor Bound Protein 2; Growth Factor Receptor-Bound Protein 2; NCKAP2; SH2/SH3 Adapter GRB2; Protein Ash; ASH; Epidermal Growth Factor Receptor-Binding Protein GRB2; Epididymis Secretory Sperm Binding Protein; Growth Factor Receptor-Bound Protein 3; Antibodyundant SRC Homology; Adapter Protein GRB2; EGFRBP-GRB2; MSTP084; Grb3-3; MST084; HT027
Immunogen	A synthesized peptide derived from human GRB2

KD-Validated Anti-Growth factor receptor bound protein 2 Rabbit 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	

KD-Validated Anti-Growth factor receptor bound protein 2 Rabbit 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: [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, PubMed:37626338, PubMed: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

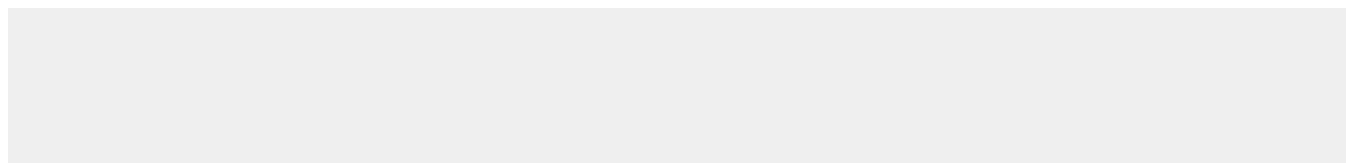
Nucleus. Cytoplasm. Endosome. Golgi apparatus {ECO:0000250|UniProtKB:Q60631}

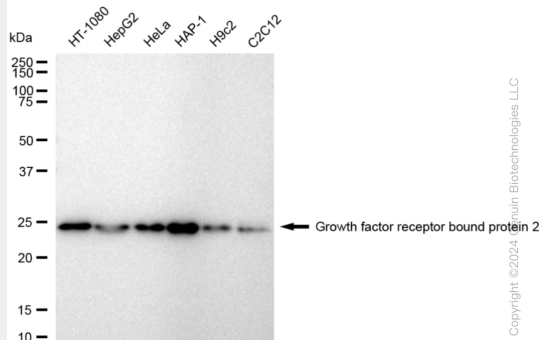
KD-Validated Anti-Growth factor receptor bound protein 2 Rabbit Monoclonal Antibody - Protocols

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

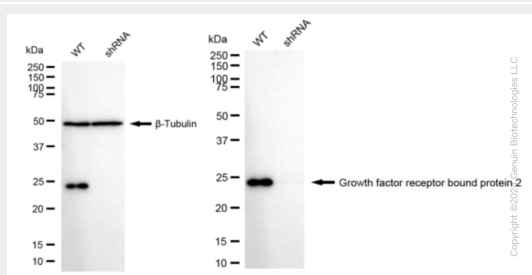
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KD-Validated Anti-Growth factor receptor bound protein 2 Rabbit Monoclonal Antibody - Images

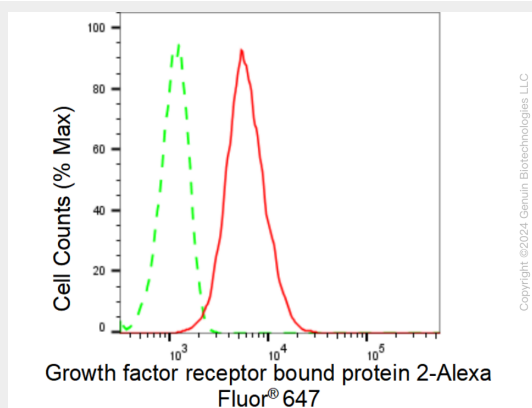




Western blotting analysis using anti-Growth factor receptor bound protein 2 antibody (Cat#AGI1558). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Growth factor receptor bound protein 2 antibody (Cat#AGI1558, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Growth factor receptor bound protein 2 antibody (Cat#AGI1558). Growth factor receptor bound protein 2 expression in wild type (WT) and Growth factor receptor bound protein 2 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-Growth factor receptor bound protein 2 antibody (Cat#AGI1558, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Growth factor receptor bound protein 2 expression in HT-1080 cells using Growth factor receptor bound protein 2 antibody (Cat#AGI1558, 1:2,000). Green, isotype control; red, Growth factor receptor bound protein 2.