

Goat anti-GRB2, biotinylated Antibody

Peptide-affinity purified goat antibody

Catalog # AF4351a

Product Information

Application	WB, Pep-ELISA
Primary Accession	P62993
Other Accession	NP_002077.1 , NP_987102.1
Reactivity	Human, Mouse, Rat, Dog, Bovine
Host	Goat
Clonality	Polyclonal
Clone Names	GRB2
Calculated MW	25206

Additional Information

Gene ID	2885
Other Names	GRB2; growth factor receptor-bound protein 2; ASH; EGFRBP-GRB2; Grb3-3; MST084; MSTP084; NCKAP2; HT027; SH2/SH3 adapter GRB2; abundant SRC homology; epidermal growth factor receptor-binding protein GRB2; growth factor receptor-bound protein 3; protein Ash
Dilution	WB~~1:1000 Pep-ELISA~~N/A
Format	Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin. Aliquot and store at -20°C. Minimize freezing and thawing.
Immunogen	This antibody is expected to recognize both reported isoforms (NP_002077.1 and NP_987102.1).
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Goat anti-GRB2, biotinylated Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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:[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}

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.