G3BP1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	G3BP1, Polyclonal Antibody
Full Product Name	G3BP1, CT (G3BP1, G3BP, Ras GTPase-activating protein-binding protein 1, ATP-dependent DNA helicase VIII, GAP SH3 domain-binding protein 1) (MaxLight 405)
Product Gene Name	anti-G3BP1 antibody
Product Synonym Names	G3BP1; G3BP; Ras GTPase-activating protein-binding protein 1; ATP-dependent DNA helicase VIII; GAP SH3 domain-binding protein 1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight405.
Purity/Purification	Purified by Protein A and Peptide Affinity Chromatography.
Specificity	Recognizes human G3BP1.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight405 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	13,874 Da
OMIM	608431
3D Structure	ModBase 3D Structure for Q13283
Immunogen	KLH-conjugated synthetic peptide mapping to a fragment of residues within amino acids 401-430 in the C-terminal region of human G3BP1. Species sequence homology: bovine, mouse
Conjugate	MaxLight405
Note	Preservative Free
Product Categories/Family for anti-G3BP1 antibody	Antibodies; GTPase; Rab; Ras; Rho Proteins
Applications Tested/Suitable for anti-G3BP1 antibody	Immunohistochemistry (IHC) Paraffin, FLISA, Western Blot (WB)
Application Notes for anti-G3BP1 antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-G3BP1 antibody	MBS6300647 is an antibody targeting G3BP1. Also known as G3BP1, CT (G3BP1, G3BP, Ras GTPase-activating protein-binding protein 1, ATP-dependent DNA helicase VIII, GAP SH3 domain-binding protein 1) (MaxLight 405). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-G3BP1 antibody	1. Gao, X., et al. FEBS Lett. 584(16):3525-3532(2010). 2. Ortega, A.D., et al. J. Cell. Sci. 123 (PT 16), 2685-2696 (2010). 3. Hinton, S.D., et al. Biochem. J. 427(3):349-357(2010). 4. Shim, J.H., et al. Cancer Prev Res (Phila) 3(5):670-679(2010). 5. Zhang, H.Z., et al. World J. Gastroenterol. 13(30):4126-4130(2007).

Other Notes	Small volumes of anti-G3BP1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for G3BP1. It may not necessarily be applicable to this product.

NCBI GI #	38327552
NCBI GeneID	10146
NCBI Accession #	NP_938405.1
NCBI Related Accession #	NP_005745.1
UniProt Primary Accession #	Q13283
UniProt Secondary Accession #	Q5HYE9
UniProt Related Accession #	Q13283
GenBank Nucleotide #	NM_198395.1
NCBI Official Full Name	ras GTPase-activating protein-binding protein 1
NCBI Official Synonym Full Names	G3BP stress granule assembly factor 1
NCBI Official Symbol	G3BP1
NCBI Official Synonym Symbols	G3BP; HDH-VIII
UniProt Protein Name	Ras GTPase-activating protein-binding protein 1
UniProt Synonym Protein Names	ATP-dependent DNA helicase VIII; hDH VIII; GAP SH3 domain-binding protein 1
Protein Family	Ras GTPase-activating protein-binding protein
UniProt Gene Name	G3BP1
UniProt Synonym Gene Names	G3BP; G3BP-1; hDH VIII
UniProt Entry Name	G3BP1_HUMAN
NCBI Protein Information	ras GTPase-activating protein-binding protein 1
NCBI Summary for G3BP1	This gene encodes one of the DNA-unwinding enzymes which prefers partially unwound 3'-tailed substrates and can also unwind partial RNA/DNA and RNA/RNA duplexes in an ATP-dependent fashion. This enzyme is a member of the heterogeneous nuclear RNA-binding proteins and is also an element of the Ras signal transduction pathway. It binds specifically to the Ras-GTPase-activating protein by associating with its SH3 domain. Several alternatively spliced transcript variants of this gene have been described, but the full-length nature of some of these variants has not been determined. [provided by RefSeq, Jul 2008]

UniProt Comments for G3BP1	G3BP-1: an hnRNA-binding protein and endoribonuclease that participates in the Ras signal transduction pathway. A regulated effector of stress granule (SG) assembly. SGs are involved in mRNA sorting in the storing of untranslated mRNAs. Cleaves exclusively between cytosine and adenine and cleaves MYC mRNA preferentially at the 3'-UTR. ATP- and magnesium-dependent helicase. Unwinds preferentially partial DNA and RNA duplexes having a 17 bp annealed portion and either a hanging 3' tail or hanging tails at both 5'- and 3'-ends. Unwinds DNA/DNA, RNA/DNA, and RNA/RNA substrates with comparable efficiency. Acts unidirectionally by moving in the 5' to 3' direction along the bound single-stranded DNA. Binds to the SH3 domain of Ras GTPase-activating protein (RasGAP) in proliferating cells but not in quiescent cells. Cytoplasmic in proliferating cells, can be recruited to the plasma membrane in exponentially growing cells. Cytosolic and partially nuclear in resting cells. Recruited to SGs upon either arsenite or high temperature treatment. RasGAP-dependent phosphorylation of S149 induces a conformational change that prevents self-association. Dephosphorylation after HRAS activation is required for stress granule assembly. S149 phosphorylation induces partial nuclear localization. A component of a TAU mRNP complex, Interacts with USP10, and may regulate it. Protein type: EC 3.6.4.12; RNA-binding; Helicase; Adaptor/scaffold; EC 3.6.4.13 Chromosomal Location of Human Ortholog: 5q33.1 Cellular Component: focal adhesion; stress granule; cytoplasm; plasma membrane; cytosol; nucleus Molecular Function: mRNA binding; ATP-dependent DNA helicase activity; protein binding; DNA binding; endonuclease activity; ATP-dependent RNA helicase activity; ATP binding Biological Process: transport; metabolic process; Ras protein signal transduction; DNA duplex unwinding
Research Articles on G3BP1	**1.** The G3BP1-Caprin1-PKR complex represents a new mode of PKR activation and is important for antiviral activity of G3BP1 and PKR during infection with mengovirus.
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