

G3BP Rabbit mAb
Catalog # AP76799

Specification

G3BP Rabbit mAb - Product Information

Application	WB, IF
Primary Accession	Q13283
Reactivity	Human, Rat
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	52164

G3BP Rabbit mAb - Additional Information

Gene ID 10146

Other Names

G3BP1

Dilution

WB~~1/500-1/1000

IF~~1/50-1/200

Format

Liquid

G3BP Rabbit mAb - Protein Information

Name G3BP1 {ECO:0000303|PubMed:23279204, ECO:0000312|HGNC:HGNC:30292}

Function

Protein involved in various processes, such as stress granule formation and innate immunity (PubMed:12642610, PubMed:20180778, PubMed:23279204, PubMed:30510222, PubMed:30804210). Plays an essential role in stress granule formation (PubMed:12642610, PubMed:20180778, PubMed:23279204, PubMed:32302570, PubMed:32302571, PubMed:32302572, PubMed:34739333, PubMed:35977029, PubMed:36183834, PubMed:36279435, PubMed:<a

[36692217](http://www.uniprot.org/citations/36692217), PubMed:[37379838](http://www.uniprot.org/citations/37379838)). Stress granules are membraneless compartments that store mRNAs and proteins, such as stalled translation pre-initiation complexes, in response to stress (PubMed:[12642610](http://www.uniprot.org/citations/12642610), PubMed:[20180778](http://www.uniprot.org/citations/20180778), PubMed:[23279204](http://www.uniprot.org/citations/23279204), PubMed:[27022092](http://www.uniprot.org/citations/27022092), PubMed:[32302570](http://www.uniprot.org/citations/32302570), PubMed:[32302571](http://www.uniprot.org/citations/32302571), PubMed:[32302572](http://www.uniprot.org/citations/32302572), PubMed:[36279435](http://www.uniprot.org/citations/36279435), PubMed:[37379838](http://www.uniprot.org/citations/37379838)). Promotes formation of stress granules phase-separated membraneless compartment by undergoing liquid-liquid phase separation (LLPS) upon unfolded RNA-binding: functions as a molecular switch that triggers RNA-dependent LLPS in response to a rise in intracellular free RNA concentrations (PubMed:[32302570](http://www.uniprot.org/citations/32302570), PubMed:[32302571](http://www.uniprot.org/citations/32302571), PubMed:[32302572](http://www.uniprot.org/citations/32302572), PubMed:[34739333](http://www.uniprot.org/citations/34739333), PubMed:[36279435](http://www.uniprot.org/citations/36279435), PubMed:[36692217](http://www.uniprot.org/citations/36692217)). Also acts as an ATP- and magnesium-dependent helicase: unwinds DNA/DNA, RNA/DNA, and RNA/RNA substrates with comparable efficiency (PubMed:[9889278](http://www.uniprot.org/citations/9889278)). Acts unidirectionally by moving in the 5' to 3' direction along the bound single-stranded DNA (PubMed:[9889278](http://www.uniprot.org/citations/9889278)). 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 (PubMed:[9889278](http://www.uniprot.org/citations/9889278)). Plays an essential role in innate immunity by promoting CGAS and RIGI activity (PubMed:[30510222](http://www.uniprot.org/citations/30510222), PubMed:[30804210](http://www.uniprot.org/citations/30804210)). Participates in the DNA-triggered cGAS/STING pathway by promoting the DNA binding and activation of CGAS (PubMed:[30510222](http://www.uniprot.org/citations/30510222)). Triggers the condensation of cGAS, a process probably linked to the formation of membrane-less organelles (PubMed:[34779554](http://www.uniprot.org/citations/34779554) target="_blank">34779554). Enhances also RIGI-induced type I interferon production probably by helping RIGI at sensing pathogenic RNA (PubMed:[30804210](http://www.uniprot.org/citations/30804210) target="_blank">30804210). May also act as a phosphorylation- dependent sequence-specific endoribonuclease in vitro: Cleaves exclusively between cytosine and adenine and cleaves MYC mRNA preferentially at the 3'-UTR (PubMed:[11604510](http://www.uniprot.org/citations/11604510) target="_blank">11604510).

Cellular Location

Cytoplasm, cytosol. Perikaryon {ECO:0000250|UniProtKB:P97855}. Cytoplasm, Stress granule. Nucleus Note=Cytoplasmic in proliferating cells (PubMed:11604510). Cytosolic and partially nuclear in resting cells (PubMed:11604510). Recruited to stress granules in response to arsenite treatment (PubMed:12642610, PubMed:20180778). The unphosphorylated form is recruited to stress granules (PubMed:12642610). HRAS signaling contributes to this process by regulating G3BP dephosphorylation (PubMed:12642610)

Tissue Location

Ubiquitous..

G3BP Rabbit mAb - 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](#)

G3BP Rabbit mAb - Images

