

## Anti-G3BP Rabbit Monoclonal Antibody Catalog # ABO15705

### Specification

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#### Anti-G3BP Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	<a href="#">Q13283</a>
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

#### Description

Anti-G3BP Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

#### Anti-G3BP Rabbit Monoclonal Antibody - Additional Information

Gene ID 10146

#### Other Names

Ras GTPase-activating protein-binding protein 1, G3BP-1, 3.6.4.12, 3.6.4.13, ATP-dependent DNA helicase VIII, hDH VIII, GAP SH3 domain-binding protein 1, G3BP1  
{ECO:0000303|PubMed:23279204, ECO:0000312|HGNC:HGNC:30292}

#### Calculated MW

68 kDa KDa

#### Application Details

WB 1:500-1:2000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>IP 1:20<br>FC 1:50

#### Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

#### Immunogen

A synthesized peptide derived from human G3BP

#### Purification

Affinity-chromatography

#### Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

#### Anti-G3BP Rabbit Monoclonal Antibody - 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:<a href="http://www.uniprot.org/citations/12642610" target="\_blank">12642610</a>, PubMed:<a href="http://www.uniprot.org/citations/20180778" target="\_blank">20180778</a>, PubMed:<a href="http://www.uniprot.org/citations/23279204" target="\_blank">23279204</a>, PubMed:<a href="http://www.uniprot.org/citations/30510222" target="\_blank">30510222</a>, PubMed:<a href="http://www.uniprot.org/citations/30804210" target="\_blank">30804210</a>). Plays an essential role in stress granule formation (PubMed:<a href="http://www.uniprot.org/citations/12642610" target="\_blank">12642610</a>, PubMed:<a href="http://www.uniprot.org/citations/20180778" target="\_blank">20180778</a>, PubMed:<a href="http://www.uniprot.org/citations/23279204" target="\_blank">23279204</a>, PubMed:<a href="http://www.uniprot.org/citations/32302570" target="\_blank">32302570</a>, PubMed:<a href="http://www.uniprot.org/citations/32302571" target="\_blank">32302571</a>, PubMed:<a href="http://www.uniprot.org/citations/32302572" target="\_blank">32302572</a>, PubMed:<a href="http://www.uniprot.org/citations/34739333" target="\_blank">34739333</a>, PubMed:<a href="http://www.uniprot.org/citations/35977029" target="\_blank">35977029</a>, PubMed:<a href="http://www.uniprot.org/citations/36183834" target="\_blank">36183834</a>, PubMed:<a href="http://www.uniprot.org/citations/36279435" target="\_blank">36279435</a>, PubMed:<a href="http://www.uniprot.org/citations/36692217" target="\_blank">36692217</a>, PubMed:<a href="http://www.uniprot.org/citations/37379838" target="\_blank">37379838</a>). Stress granules are membraneless compartments that store mRNAs and proteins, such as stalled translation pre-initiation complexes, in response to stress (PubMed:<a href="http://www.uniprot.org/citations/12642610" target="\_blank">12642610</a>, PubMed:<a href="http://www.uniprot.org/citations/20180778" target="\_blank">20180778</a>, PubMed:<a href="http://www.uniprot.org/citations/23279204" target="\_blank">23279204</a>, PubMed:<a href="http://www.uniprot.org/citations/27022092" target="\_blank">27022092</a>, PubMed:<a href="http://www.uniprot.org/citations/32302570" target="\_blank">32302570</a>, PubMed:<a href="http://www.uniprot.org/citations/32302571" target="\_blank">32302571</a>, PubMed:<a href="http://www.uniprot.org/citations/32302572" target="\_blank">32302572</a>, PubMed:<a href="http://www.uniprot.org/citations/36279435" target="\_blank">36279435</a>, PubMed:<a href="http://www.uniprot.org/citations/37379838" target="\_blank">37379838</a>). 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:<a href="http://www.uniprot.org/citations/32302570" target="\_blank">32302570</a>, PubMed:<a href="http://www.uniprot.org/citations/32302571" target="\_blank">32302571</a>, PubMed:<a href="http://www.uniprot.org/citations/32302572" target="\_blank">32302572</a>, PubMed:<a href="http://www.uniprot.org/citations/34739333" target="\_blank">34739333</a>, PubMed:<a href="http://www.uniprot.org/citations/36279435" target="\_blank">36279435</a>, PubMed:<a href="http://www.uniprot.org/citations/36692217" target="\_blank">36692217</a>). Also acts as an ATP- and magnesium-dependent helicase: unwinds DNA/DNA, RNA/DNA, and RNA/RNA substrates with comparable efficiency (PubMed:<a href="http://www.uniprot.org/citations/9889278" target="\_blank">9889278</a>). Acts unidirectionally by moving in the 5' to 3' direction along the bound single-stranded DNA (PubMed:<a href="http://www.uniprot.org/citations/9889278" target="\_blank">9889278</a>). 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:<a href="http://www.uniprot.org/citations/9889278" target="\_blank">9889278</a>). Plays an essential role in innate immunity by promoting CGAS and RIGI activity (PubMed:<a href="http://www.uniprot.org/citations/30510222" target="\_blank">30510222</a>, PubMed:<a href="http://www.uniprot.org/citations/30804210" target="\_blank">30804210</a>). Participates in the DNA-triggered cGAS/STING pathway by promoting the DNA binding and activation of CGAS (PubMed:<a href="http://www.uniprot.org/citations/30510222" target="\_blank">30510222</a>). Triggers the condensation of cGAS, a process probably linked to the formation of membrane-less organelles (PubMed:<a href="http://www.uniprot.org/citations/34779554" target="\_blank">34779554</a>).

target="\_blank">34779554</a>). Enhances also RIGI-induced type I interferon production probably by helping RIGI at sensing pathogenic RNA (PubMed:<a href="http://www.uniprot.org/citations/30804210" target="\_blank">30804210</a>). 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:<a href="http://www.uniprot.org/citations/11604510" target="\_blank">11604510</a>).

#### 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

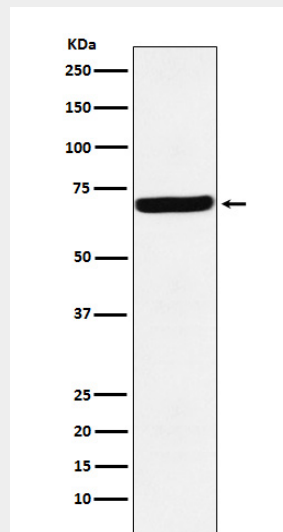
Ubiquitous..

### Anti-G3BP Rabbit Monoclonal Antibody - Protocols

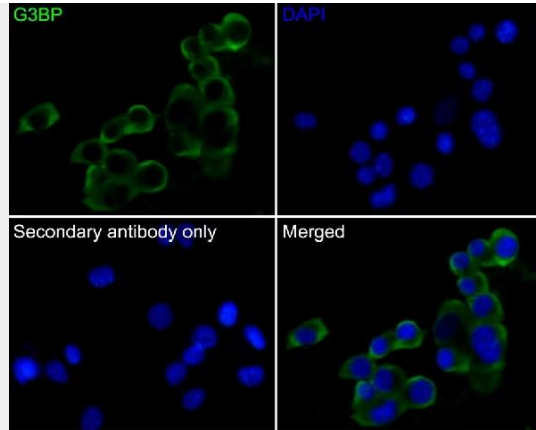
Provided below are standard protocols that you may find useful for product applications.

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

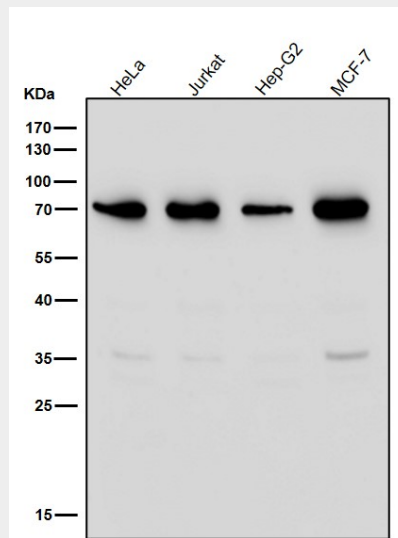
### Anti-G3BP Rabbit Monoclonal Antibody - Images



Western blot analysis of G3BP expression in HeLa cell lysate.



Immunocytochemistry analysis of N2A cells, using G3BP antibody.



All lanes use the Antibody at 1:2W dilution for 1 hour at room temperature.