

## Product datasheet

# Anti-G3BP antibody ab56574

★★★★★ 7 Abreviews 21 References 5 Images

### Overview

<b>Product name</b>	Anti-G3BP antibody
<b>Description</b>	Mouse monoclonal to G3BP
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, Flow Cyt, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Recombinant fragment: KPEPVLEETA PEDAQKSSSP APADIAQTVQ EDLRTFSWAS VTSKNLPPSG AVPVTGIPPH VVKVPASQPR PESKPESQIP PQRQQRDQRV , corresponding to amino acids 214-303 of Human G3BP <a href="#">Run BLAST with ExPASy</a> <a href="#">Run BLAST with NCBI</a>
<b>General notes</b>	This product was changed from ascites to tissue culture supernatant on 22/03/2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	Preservative: None PBS, pH 7.2
<b>Purity</b>	Tissue culture supernatant
<b>Clonality</b>	Monoclonal
<b>Isotype</b>	IgG1
<b>Light chain type</b>	kappa

### Applications

Our [Abpromise guarantee](#) covers the use of **ab56574** in the following tested applications.

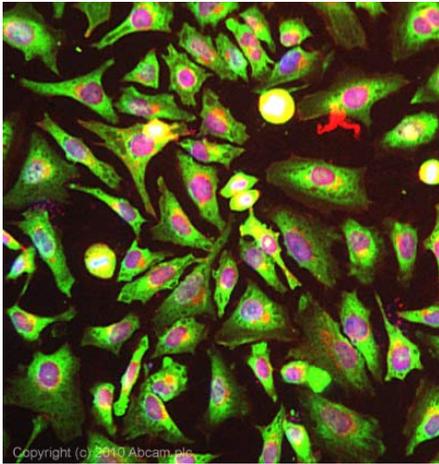
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★	Use at an assay dependent concentration. Predicted molecular weight: 52 kDa.
IHC-P		Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration. <a href="#">ab170190</a> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC/IF	★★★★★	Use at an assay dependent concentration.

## Target

<b>Function</b>	May be a regulated effector of stress granule assembly. Phosphorylation-dependent sequence-specific endoribonuclease in vitro. 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.
<b>Tissue specificity</b>	Ubiquitous.
<b>Sequence similarities</b>	Contains 1 NTF2 domain. Contains 1 RRM (RNA recognition motif) domain.
<b>Domain</b>	The NTF2 domain mediates multimerization.
<b>Post-translational modifications</b>	Phosphorylated exclusively on serine residues. Hyperphosphorylated in quiescent fibroblasts. Hypophosphorylation leads to a decrease in endoribonuclease activity (By similarity). RASA1-dependent phosphorylation of Ser-149 induces a conformational change that prevents self-association. Dephosphorylation after HRAS activation is required for stress granule assembly. Ser-149 phosphorylation induces partial nuclear localization. Arg-435 is dimethylated, probably to asymmetric dimethylarginine.
<b>Cellular localization</b>	Cytoplasm. Cytoplasm > cytosol. Cell membrane. Nucleus. Cytoplasmic in proliferating cells, can be recruited to the plasma membrane in exponentially growing cells (By similarity). Cytosolic and partially nuclear in resting cells. Recruited to stress granules (SGs) upon either arsenite or high temperature treatment. Recruitment to SGs is influenced by HRAS.

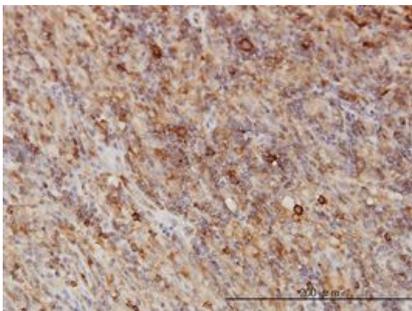
## Images



Immunocytochemistry/ Immunofluorescence - Anti-G3BP antibody (ab56574)

ICC/IF image of ab56574 stained HeLa cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab56574, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

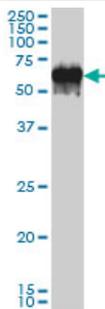
This image was generated using the ascites version of the product.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-G3BP antibody (ab56574)

G3BP antibody (ab56574) used in immunohistochemistry at 1ug/ml on formalin fixed and paraffin embedded human lymphoma.

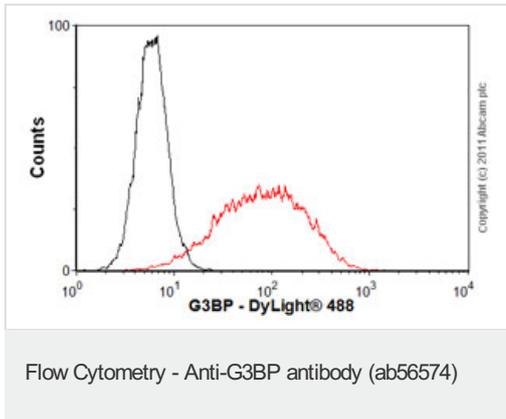
This image was generated using the ascites version of the product.



Western blot - Anti-G3BP antibody (ab56574)

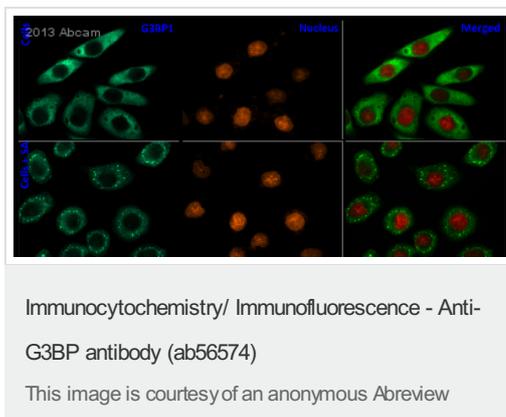
G3BP antibody (ab56574) at 1ug/lane + A-431 cell lysate at 25ug/lane.

This image was generated using the ascites version of the product.



Overlay histogram showing HeLa cells stained with ab56574 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab56574, 1µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HeLa cells fixed with 80% methanol (5 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.

This image was generated using the ascites version of the product.



ab56574 staining G3BP in Human HeLa cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with formaldehyde, permeabilized with Triton X-100 and blocked with 5% BSA for 12 hours at 4°C. Samples were incubated with primary antibody (1/500 in PBS) for 1 hour at 37°C. An Alexa Fluor® 488-conjugated Goat anti-mouse IgG polyclonal (1/1000) was used as the secondary antibody.

Top row - untreated cells. Bottom row - cells treated with sodium arsenite. Left - G3BP, Middle - Nucleus, Right - Merge.

Stress granules are visible in cells treated with sodium arsenite, whereas G3BP is dispersed in the cytoplasm in untreated cells.

This image was generated using the ascites version of the product.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

## Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors