abcam

ab317687

Anti-G3BP2 (isoform a) antibody [EPR27325-43]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR27325-43
Purification technique	Affinity purification Protein A
Specificity	This antibody specifically recognizes G3BP2 (isoform a) but not G3BP2 (isoform b).
Concentration	0.527 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Dot

Tested

Species	Recombinant fragment - Human
Dilution info	1/1000
Notes	-

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500

Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat, Recombinant fragment - Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat, Recombinant fragment - Human
Dilution info	-
Notes	-

Target data

See full target information G3BP2

Function

Scaffold protein that plays an essential role in cytoplasmic stress granule formation which acts as a platform for antiviral signaling (PubMed:23279204, PubMed:32302570, PubMed:32302571, PubMed:32302572). Plays an essential role in stress granule formation (PubMed:27022092, PubMed:32302570, PubMed:32302571, PubMed:32302572, PubMed:35977029). Stress granules are membraneless compartments that store mRNAs and proteins, such as stalled translation pre-initiation complexes, in response to stress (PubMed:32302570, PubMed:32302571, PubMed:32302572). 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 (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

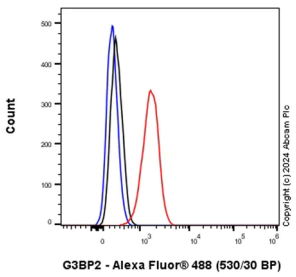
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

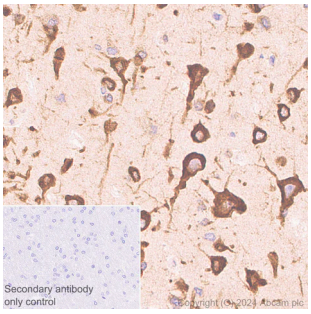
8 product images



Flow Cytometry (Intracellular) - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling G3BP2 (isoform a) with ab317687 at 1/500 dilution (0.1 ug)/Red (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687)

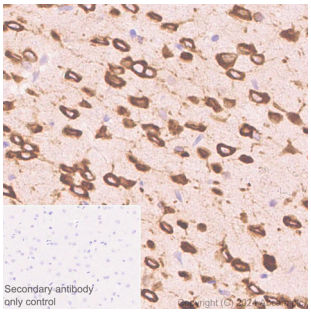
Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling G3BP2 (isoform a) with ab317687 at 1/100 (5.27 ug/ml) dilution, followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Positive staining on neurons of human cerebrum (PMID: 33203845). The section was incubated with ab317687 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687)

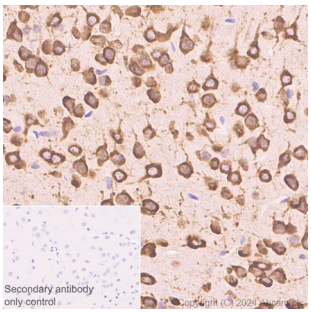
Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labeling G3BP2 (isoform a) with ab317687 at 1/2000 (0.264 ug/ml) dilution, followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Positive staining on neurons of rat cerebrum. The section was incubated with ab317687 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687)

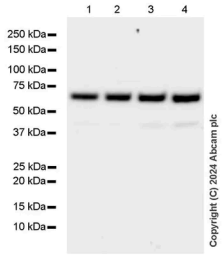
Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling G3BP2 (isoform a) with ab317687 at 1/2000 (0.264 ug/ml) dilution, followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Positive staining on neurons of mouse cerebrum. The section was incubated with ab317687 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Western blot - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687)

G3BP2 (isoform a) Western blot staining using rabbit Anti-G3BP2 (isoform a) antibody

The lysates were freshly made and used for Western Blotting immediately to minimize protein degradation.

All lanes:
Western blot - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687) at 1/1000 dilution

Lane 1:
HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
293T (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Lane 3:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

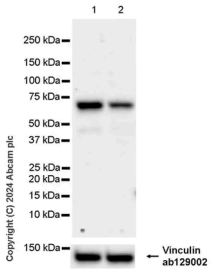
Lane 4:
PC-12 (rat adrenal gland pheochromocytoma cell) whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Observed band size: 70 kDa

Exposure time: 26s



Western blot - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687)

G3BP2 (isoform a) Western blot staining using rabbit Anti-G3BP2 (isoform a) antibody

In Western blot, Anti-Vinculin antibody [EPR8185] (ab129002) staining at 1/10000 dilution.

All lanes:
Western blot - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687) at 1/1000 dilution

Lane 1:
HeLa (human cervical adenocarcinoma epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

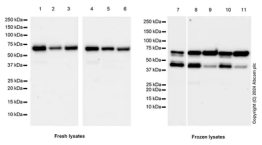
Lane 2:
HeLa transfected with siRNA specifically targeting G3BP2 whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Observed band size: 70 kDa, 124 kDa

Exposure time: 81s



Western blot - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687)

G3BP2 (isoform a) Western blot staining using rabbit Anti-G3BP2 (isoform a) antibody

The lysates were freshly made and used for Western Blotting immediately to minimize protein degradation.

The bands beneath the target band (40 kDa) are likely to be degraded target fragments.

Exposure time: Lanes 1-6: 10 seconds, Lanes 7-11: 48 seconds

All lanes:
Western blot - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687) at 1/1000 dilution

Lanes 1 and 9:
Mouse brain tissue lysate at 20 µg

Lane 2:
Mouse liver tissue lysate at 20 µg

Lane 3:
Mouse testis tissue lysate at 20 µg

Lane 4:
Rat brain tissue lysate at 20 µg

Lane 5:
Rat liver tissue lysate at 20 µg

Lane 6:
Rat testis tissue lysate at 20 µg

Lane 7:
Human cerebellum tissue lysate at 20 µg

Lane 8:
Mouse cerebral cortex tissue lysate at 20 µg

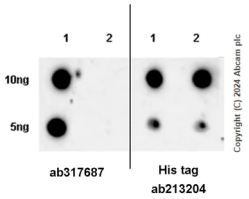
Lane 10:
Rat cerebellum tissue lysate at 20 µg

Lane 11:
Rat cerebral cortex tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Observed band size: 70 kDa, 40 kDa



Dot Blot - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687)

G3BP2 (isoform a) Dot Blot staining using rabbit Anti-G3BP2 (isoform a) antibody

Dot blot analysis of G3BP2 (isoform a) using ab317687 at 1:1000 (0.527 ug/ml) followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1:100,000 dilution.

Lane 1:His-tagged human G3BP2 fragment Lane 2:His-tagged human G3BP1 fragment

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

This antibody does not cross-react with human G3BP1.

Anti-6X His tag® antibody [EPR20547] - ChIP Grade (ab213204) as total protein control staining at 1/5000 dilution.

All lanes:
Dot Blot - Anti-G3BP2 (isoform a) antibody [EPR27325-43] (ab317687) at 1/1000 dilution

Lane 1:
His-tagged human G3BP2 recombinant protein

Lane 2:
His-tagged human G3BP1 recombinant protein

Secondary

All lanes:
Dot Blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Exposure time: 180s

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