

For Research Use Only

# G3BP2 Recombinant antibody, PBS Only (Capture)

Catalog Number: 82080-4-PBS



## Basic Information

<b>Catalog Number:</b> 82080-4-PBS	<b>GenBank Accession Number:</b> BC011731	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ug, Concentration: 1mg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 9908	<b>CloneNo.:</b> 230275D6
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> Q9UN86	
<b>Isotype:</b> IgG	<b>Full Name:</b> GTPase activating protein (SH3 domain) binding protein 2	
<b>Immunogen Catalog Number:</b> AG9355	<b>Calculated MW:</b> 482aa,54 kDa; 449aa,51 kDa	
	<b>Observed MW:</b> 65-70 kDa	

## Applications

**Tested Applications:**  
WB, IHC, IF/ICC, FC (Intra), Cytometric bead array, Sandwich ELISA, Indirect ELISA, Sample test

**Species Specificity:**  
human

## Product Information

82080-4-PBS targets G3BP2 as part of a matched antibody pair:

MP00090-1: 82080-4-PBS capture and 82080-3-PBS detection (validated in Cytometric bead array)

MP00090-2: 82080-4-PBS capture and 82080-5-PBS detection (validated in Cytometric bead array)

MP00090-3: 82080-4-PBS capture and 82080-2-PBS detection (validated in Cytometric bead array, Sandwich ELISA)

Unconjugated rabbit recombinant monoclonal antibody in PBS only (BSA and azide free) storage buffer at a concentration of 1 mg/mL, ready for conjugation. Created using Proteintech's proprietary in-house recombinant technology. Recombinant production enables unrivalled batch-to-batch consistency, easy scale-up, and future security of supply.

This conjugation ready format makes antibodies ideal for use in many applications including: ELISAs, multiplex assays requiring matched pairs, mass cytometry, and multiplex imaging applications. Antibody use should be optimized by the end user for each application and assay.

## Background Information

Stress granules (SGs) are cytoplasmic mRNA-protein condensates formed in response to cellular stressors, such as oxidative stress, ultraviolet radiation, and viral infection (1). The Ras-GTPase-activating protein-binding proteins (G3BPs), consisting of G3BP1 and G3BP2, are key nucleating factors essential for SG formation. They function to protect RNAs from harmful conditions. G3BP2 is mainly distributed in the cytoplasm and participates in the formation of stress granules, cell differentiation, proliferation, and signal transduction. Accumulating evidence has demonstrated that aberrant expression of G3BP2 contributes to cancer initiation and progression, such as high expression of G3BP2 increasing cell stemness, metastasis and chemoresistance in breast cancer.

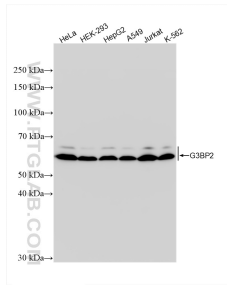
## Storage

**Storage:**  
Store at -80°C.  
**Storage Buffer:**  
100% PBS pH 7.3

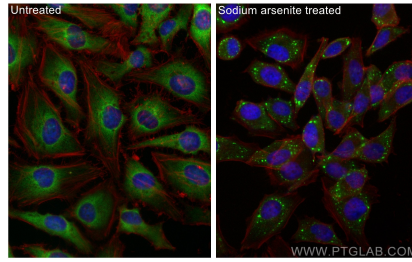
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: proteintech@ptglab.com  
W: ptglab.com

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

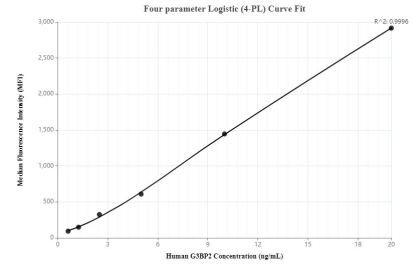
# Selected Validation Data



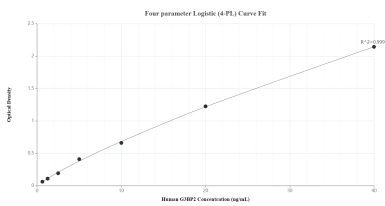
Various lysates were subjected to SDS PAGE followed by western blot with 82080-4-RR (G3BP2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 82080-4-PBS in a different storage buffer formulation.



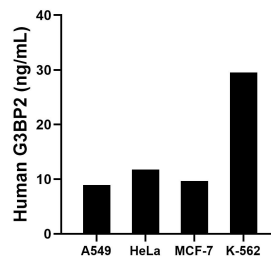
Immunofluorescent analysis of (4% PFA) fixed sodium arsenite treated HeLa cells using G3BP2 antibody (82080-4-RR, Clone: 230275D6) at dilution of 1:1000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red). This data was developed using the same antibody clone with 82080-4-PBS in a different storage buffer formulation.



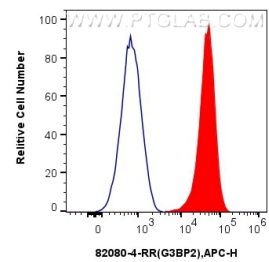
Cytometric bead array standard curve of MP00090-3, G3BP2 Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 82080-4-PBS. Detection antibody: 82080-2-PBS. Standard: Ag9355. Range: 0.625-20 ng/mL.



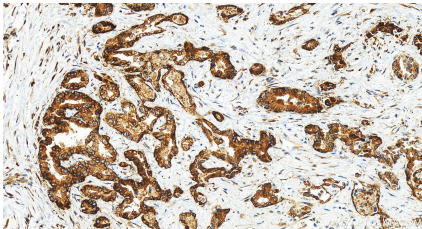
Sandwich ELISA standard curve of MP00090-3, Human G3BP2 Recombinant Matched Antibody Pair - PBS only. 82080-4-PBS was coated to a plate as the capture antibody and incubated with serial dilutions of standard Ag9355. 82080-2-PBS was HRP conjugated as the detection antibody. Range: 0.625-40 ng/mL.



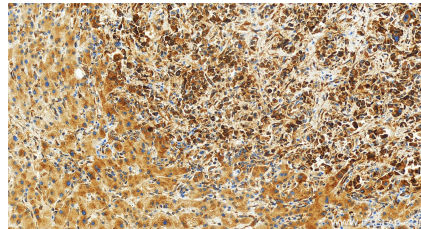
The mean G3BP2 concentration was determined to be 8.91 ng/mL in A549 cell extract based on a 2.20 mg/mL extract load, 11.75 ng/mL in HeLa cell extract based on a 3.20 mg/mL extract load, 9.66 ng/mL in MCF-7 cell extract based on a 4.30 mg/mL extract load and 29.51 ng/mL in K-562 cell extract based on a 4.50 mg/mL extract load.



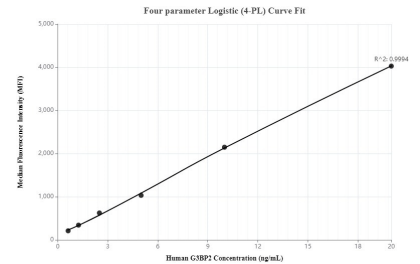
$1 \times 10^6$  U2OS cells were intracellularly treated with 0.25  $\mu$ g Anti-Human G3BP2 (82080-4-RR, Clone:230275D6) and APC-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:166 (red), or 0.25  $\mu$ g Rabbit IgG control Rabbit PolyAb (30000-0-AP) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C). This data was developed using the same antibody clone with 82080-4-PBS in a different storage buffer formulation.



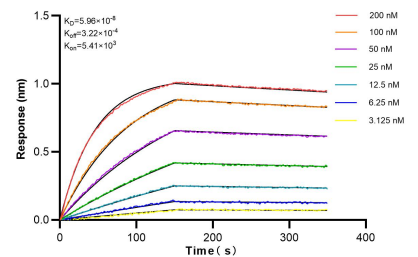
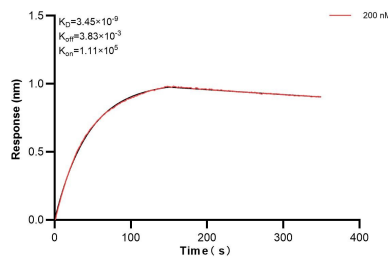
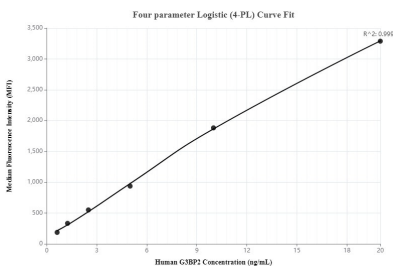
Immunohistochemical analysis of paraffin-embedded human intrahepatic cholangiocarcinoma tissue slide using 82080-4-RR (G3BP2 antibody) at dilution of 1:1000 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 82080-4-PBS in a different storage buffer formulation.



Immunohistochemical analysis of paraffin-embedded human intrahepatic cholangiocarcinoma tissue slide using 82080-4-RR (G3BP2 antibody) at dilution of 1:1000 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 82080-4-PBS in a different storage buffer formulation.



Cytometric bead array standard curve of MP00090-1, G3BP2 Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 82080-4-PBS. Detection antibody: 82080-3-PBS. Standard: Ag9355. Range: 0.625-20 ng/mL.



Cytometric bead array standard curve of MP00090-2, G3BP2 Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 82080-4-PBS. Detection antibody: 82080-5-PBS. Standard: Ag9355. Range: 0.625-20 ng/mL.

Biolayer interferometry (BLI) kinetic assay of 82080-4-PBS against Human G3BP2 was performed. The affinity constant is 3.48 nM.

Biolayer interferometry (BLI) kinetic assays of 82080-4-RR against Human G3BP2 were performed. The affinity constant is 59.6 nM.