abcam

ab233097

Anti-CYR61/CCN1 antibody [EPR20681] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR20681
Purification technique	Affinity purification Protein A
Concentration	1.062 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information CCN1

Function	Promotes cell proliferation, chemotaxis, angiogenesis and cell adhesion. Appears to play a role in wound healing by up-regulating, in skin fibroblasts, the expression of a number of genes involved in angiogenesis, inflammation and matrix remodeling including VEGA-A, VEGA-C, MMP1, MMP3, TIMP1, uPA, PAI-1 and integrins alpha-3 and alpha-5. CCN1-mediated gene regulation is dependent on heparin-binding. Down-regulates the expression of alpha-1 and alpha-2 subunits of collagen type-1. Promotes cell adhesion and adhesive signaling through integrin alpha-6/beta-1, cell migration through integrin alpha-v/beta-5 and cell proliferation through integrin alpha-v/beta-3.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab233097 is the carrier-free version of ab230947.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The CYR61/CCN1 protein also known simply as CYR61 CCN1 or CYR61 protein is a cellular protein with a molecular weight of approximately 40 kDa. It is a member of the CCN family of regulatory proteins which includes connective tissue growth factors. CYR61 is secreted into the extracellular matrix and has a critical role in cell

	adhesion and signaling. The protein is expressed in various tissues with higher levels observed in the placenta lungs and kidneys reflecting its role in organ development and repair processes.
Biological function summary	The CYR61/CCN1 protein acts as a signaling molecule that influences cell proliferation migration and adhesion. It interacts with integrins and heparan sulfate proteoglycans on the cell surface facilitating cellular communication that is essential for structural and functional tissue integrity. Additionally CYR61 is a part of multiprotein complexes impacting angiogenesis and inflammation. These activities place CYR61/CCN1 at a pivotal point in wound healing and vascularization processes.
Pathways	The CYR61/CCN1 protein participates in key signaling pathways such as the MAPK/ERK and Wnt pathways. These pathways modulate gene expression related to cell growth and differentiation. CYR61 collaborates with other proteins including VEGF and FGF to regulate cardiovascular development and morphogenesis. The interaction with these pathways highlights the protein's integral role in cellular homeostasis and response to physiological changes.
Associated diseases and disorders	CYR61/CCN1 is linked to cancer progression and fibrotic diseases. Elevated levels of this protein are frequently found in breast cancer emphasizing its role in tumor growth and metastasis. It associates with other proteins like TGF-beta during fibrotic responses contributing to the pathology of fibrosis in organs such as the liver and lungs. The involvement in these processes highlights its potential as a therapeutic target in oncology and fibrotic disease management.

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

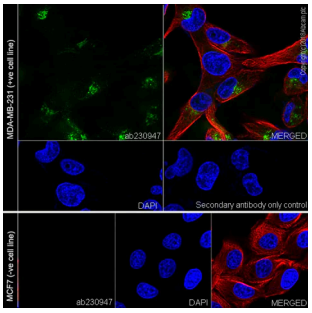
We do not recommend this combination. It is not covered by our product promise.

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.

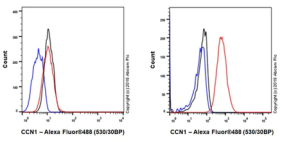
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-CYR61/CCN1 antibody [EPR20681] - BSA and Azide free (ab233097)

CYR61/CCN1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CYR61/CCN1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized MDA-MB-231 (human breast adenocarcinoma epithelial cell) cells labeling CYR61/CCN1 with ab230947 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining in the MDA-MB-231 cell line. **Negative control:** MCF7 (PMID: 11059746). The nuclear counter stain is DAPI (blue). Counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at a 1/200 dilution (red).
The negative control is the secondary antibody only.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab230947).

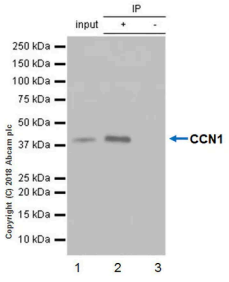


Flow Cytometry (Intracellular) - Anti-CYR61/CCN1 antibody [EPR20681] - BSA and Azide free (ab233097)

CYR61/CCN1 Flow Cytometry (Intracellular) staining using rabbit Anti-CYR61/CCN1 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized MCF7 (human breast adenocarcinoma epithelial cell, Left) / MDA-MB-231 (human breast adenocarcinoma epithelial cell, Right) cell line labeling CYR61/CCN1 with ab230947 at 1/60 (red) compared with a Rabbit monoclonal IgG (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2000 dilution was used as the secondary antibody.
Negative control: MCF7 (PMID: 11059746).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab230947).



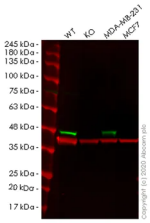
Immunoprecipitation - Anti-CYR61/CCN1 antibody [EPR20681] - BSA and Azide free (ab233097)

CYR61/CCN1 was immunoprecipitated from 0.35 mg Saos-2 (human osteosarcoma epithelial) whole cell lysate with ab230947 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab230947 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1000 dilution.
Lane 1: Saos-2 (human osteosarcoma epithelial) whole cell lysate 10 µg (Input).
Lane 2: ab230947 IP in Saos-2 whole cell lysate (+).
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab230947 in Saos-2 whole cell lysate (-).
Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 8 seconds.

The molecular mass observed is consistent with that of the full-length protein (42 kDa) (PMID: 23798676).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab230947).
All lanes:
Immunoprecipitation - Anti-CYR61/CCN1 antibody [EPR20681] (ab230947)

Predicted band size: 42 kDa



Western blot - Anti-CYR61/CCN1 antibody [EPR20681] - BSA and Azide free (ab233097)

CYR61/CCN1 Western blot staining using rabbit Anti-CYR61/CCN1 antibody

This data was developed using the same antibody clone in a different buffer formulation (ab230947).
Lanes 1-4: Merged signal (red and green). Green - ab230947 observed at 47 kDa. Red - loading control ab8245 observed at 36 kDa.

ab230947 Anti-CYR61/CCN1 antibody [EPR20681] was shown to specifically react with CYR61/CCN1 in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265288 (knockout cell lysate ab257406) was used. Wild-type and CYR61/CCN1 knockout samples were subjected to SDS-PAGE. ab230947 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 500 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-CYR61/CCN1 antibody [EPR20681] (ab230947) at 1/500 dilution

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human CYR61 (CCN1) knockout HeLa cell lysate (ab257406) at 20 µg

Lane 3:
MDA-MB-231 cell lysate at 20 µg

Lane 4:
MCF7 cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 42 kDa

Observed band size: 47 kDa

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