abcam

ab325241

Anti-Angiogenin antibody [RM2092]

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	RM2092
Purification technique	Affinity purification Protein A
Concentration	0.508 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Transfected cell lysate - Human
Dilution info	1/1000
Notes	-

Species	Human

Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/5000
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500 - 1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse, Rat, Transfected cell lysate - Human
Dilution info	-

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Transfected cell lysate - Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ANG

Function

Secreted ribonuclease that can either promote or restrict cell proliferation of target cells, depending on the context (PubMed:12051708, PubMed:1400510, PubMed:19332886, PubMed:20129916, PubMed:21855800, PubMed:23047679, PubMed:23843625, PubMed:2424496, PubMed:2459697, PubMed:2730651, PubMed:27518564, PubMed:28176817, PubMed:29100074, PubMed:29748193, PubMed:3122207, PubMed:32510170, PubMed:38718836, PubMed:8159680, PubMed:8570639, PubMed:8622921, PubMed:9578571). Endocytosed in target cells via its receptor PLXNB2 and translocates to the cytoplasm or nucleus (PubMed:29100074, PubMed:32510170). Under stress conditions, localizes to the cytoplasm and promotes the assembly of stress granules (SGs): specifically cleaves a subset of tRNAs within anticodon loops to produce tRNA-derived stress-induced fragments (tiRNAs), resulting in translation repression and inhibition of cell proliferation (PubMed:1400510, PubMed:19332886, PubMed:20129916, PubMed:21855800, PubMed:23047679, PubMed:27518564, PubMed:29100074,

PubMed:29748193, PubMed:32510170, PubMed:38718836). tiRNas also prevent formation of apoptosome, thereby promoting cell survival (By similarity). Preferentially cleaves RNAs between a pyrimidine and an adenosine residue, suggesting that it cleaves the anticodon loop of tRNA(Ala) (32-UUAGCAU-38) after positions 33 and 36 (PubMed:3289612, PubMed:38718836). Cleaves a subset of tRNAs, including tRNA(Ala), tRNA(Glu), tRNA(Gly), tRNA(Lys), tRNA(Val), tRNA(His), tRNA(Asp) and tRNA(Sec) (PubMed:31582561). Under growth conditions and in differentiated cells, translocates to the nucleus and stimulates ribosomal RNA (rRNA) transcription, including that containing the initiation site sequences of 45S rRNA, thereby promoting cell growth and proliferation (PubMed:12051708, PubMed:15735021, PubMed:27518564, PubMed:29100074, PubMed:8127865). Angiogenin induces vascularization of normal and malignant tissues via its ability to promote rRNA transcription (PubMed:19354288, PubMed:4074709, PubMed:8448182). Involved in hematopoietic stem and progenitor cell (HSPC) growth and survival by promoting rRNA transcription in growth conditions and inhibiting translation in response to stress, respectively (PubMed:27518564). Mediates the crosstalk between myeloid and intestinal epithelial cells to protect the intestinal epithelial barrier integrity: secreted by myeloid cells and promotes intestinal epithelial cells proliferation and survival (PubMed:32510170). Also mediates osteoclast-endothelial cell crosstalk in growing bone: produced by osteoclasts and protects the neighboring vascular cells against senescence by promoting rRNA transcription (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 recombinant multiclonals?
Recombinant multiclonals are a mixture of recombinant antibodies co-expressed from a library of heavy and light chains. They offer several advantages including:

- The sensitivity of polyclonal antibodies by recognising multiple epitopes
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

View our range of recombinant multiclonal 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

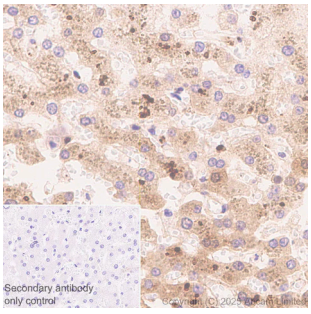
We do not recommend this combination. It is not covered by our product promise.

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.

10 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Angiogenin antibody [RM2092] (ab325241)

Angiogenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human liver using rabbit Anti-Angiogenin antibody

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Angiogenin with ab325241 at 1/500 (1.022 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

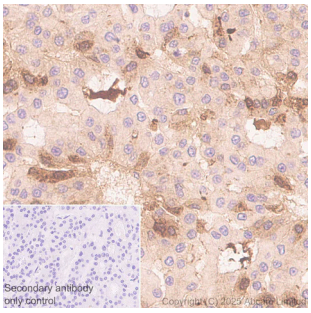
Positive staining on human liver.
The primary antibody was incubated for 30 mins at room temperature.

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 LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

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-Angiogenin antibody [RM2092] (ab325241)

Angiogenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human hepatocellular carcinoma using rabbit Anti-Angiogenin antibody

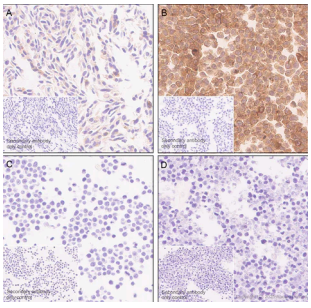
Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling Angiogenin with ab325241 at 1/500 (1.022 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

Positive staining on human hepatocellular carcinoma (PMID 25567797).
The primary antibody was incubated 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 LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

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-Angiogenin antibody [RM2092] (ab325241)

Angiogenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Angiogenin antibody

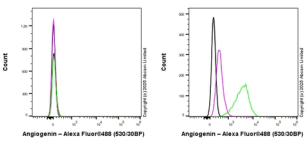
Immunohistochemical analysis of paraffin-embedded A Untreated HepG2 (human hepatocellular carcinoma epithelial cell) cell pellet B HepG2 treated with 300 ng/ml BFA for 24 hours cell pellet C Untreated Daudi (human Burkitt's lymphoma lymphoblast) cell pellet D Daudi treated with 300 ng/ml BFA for 24 hours cell pellet tissue labeling Angiogenin with ab325241 at 1/1000 (0.511 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

Weak positive on image A: Untreated HepG2 cell pellet, positive staining on image B: HepG2 treated with 300 ng/ml BFA for 24 hours cell pellet, no staining on image C: Untreated Daudi cell pellet, and weak positive staining on image D: Daudi treated with 300 ng/ml BFA for 24 hours cell pellet.
The primary antibody was incubated 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 LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

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



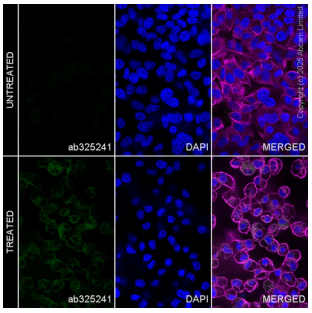
Flow Cytometry (Intracellular) - Anti-Angiogenin antibody [RM2092] (ab325241)

Angiogenin Flow Cytometry (Intracellular) staining using rabbit Anti-Angiogenin antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) (Right magenta) HepG2 treated with brefeldin A (300ng/mL) for 24 hours (Right green) Daudi (human Burkitt's lymphoma lymphoblast) (Left magenta) Daudi treated with brefeldin A (300ng/mL) for 24 hours (Left green) cells labelling Angiogenin with ab325241 at 1/5000 dilution (0.01ug) / Green and magenta compared with a Rabbit monoclonal IgG (ab172730) (Black) and Grey isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

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

Negative control: Daudi.



Immunocytochemistry/ Immunofluorescence - Anti-Angiogenin antibody [RM2092] (ab325241)

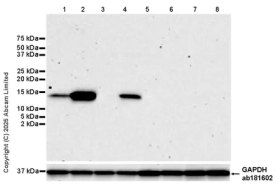
Angiogenin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Angiogenin antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) treated with BFA(300ng/ml) for 24hours;HepG2 cells labelling Angiogenin with ab325241 at 1/50 (9.8 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/ab150081 1000 2ug/ml dilution (Green).

Confocal image showing increased cytoplasmic staining in HepG2 cells treated with BFA(300ng/ml) for 24hours (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab7291 Anti-alpha Tubulin mouse monoclonal antibody was used to counterstain tubulin at 1/ab7291 1000 1ug/ml dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

-ve control 1: ab325241 at 1/50 dilution, followed by ab150120 Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) at 1/1000 dilution.
-ve control 2: ab7291 at 1/1000 dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Western blot - Anti-Angiogenin antibody [RM2092] (ab325241)

Angiogenin Western blot staining using rabbit Anti-Angiogenin antibody

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

Low expression: Daudi, Ramos

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.
All lanes:
Western blot - Anti-Angiogenin antibody [RM2092] (ab325241) at 1/1000 dilution

Lane 1:
Untreated HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
HepG2 treated with 300 ng/ml BFA for 24 hours whole cell lysate at 20 µg

Lane 3:
Untreated A549 (human lung carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4:
A549 treated with 300 ng/ml BFA for 24 hours whole cell lysate at 20 µg

Lane 5:
Untreated Daudi (human Burkitt's lymphoma lymphoblast) whole cell lysate at 20 µg

Lane 6:
Daudi treated with 300 ng/ml BFA for 24 hours whole cell lysate at 20 µg

Lane 7:
Untreated Ramos (human Burkitt's lymphoma B lymphocyte) whole cell lysate at 20 µg

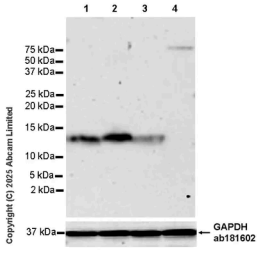
Lane 8:
Ramos treated with 300 ng/ml BFA for 24 hours whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 14 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-Angiogenin antibody [RM2092] (ab325241)

Angiogenin Western blot staining using rabbit Anti-Angiogenin antibody

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

Low expression: spleen, cerebellum

The identity of the higher MW band at approximately 75 kDa (in lane 4) is unknown.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-Angiogenin antibody [RM2092] (ab325241) at 1/1000 dilution

Lane 1:
Human colon tissue lysate at 40 µg

Lane 2:
human breast tissue lysate at 40 µg

Lane 3:
Human spleen tissue lysate at 40 µg

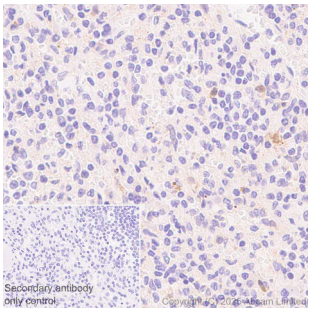
Lane 4:
Human cerebellum tissue lysate at 40 µg

Secondary

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

Observed band size: 14 kDa, 36 kDa

Exposure time: 180s



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Angiogenin antibody [RM2092] (ab325241)

Angiogenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human spleen using rabbit Anti-Angiogenin antibody

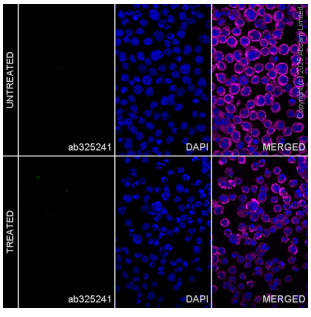
Immunohistochemical analysis of paraffin-embedded Human spleen tissue labeling Angiogenin with ab325241 at 1/500 (1.022 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

Low expression: weak staining on human spleen.
The primary antibody was incubated 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 LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

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



Immunocytochemistry/ Immunofluorescence - Anti-Angiogenin antibody [RM2092] (ab325241)

Angiogenin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Angiogenin antibody

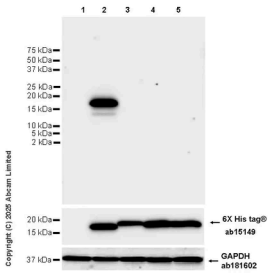
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Daudi (human Burkitt's lymphoma lymphoblast) treated with BFA(300ng/ml) 24hours;Daudi cells labelling Angiogenin with ab325241 at 1/50 (9.8 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/ab150081 1000 2ug/ml dilution (Green).

Low expression: Confocal image showing no staining in Daudi cells and Daudi cells treated with BFA(300ng/ml) 24hours (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab7291 Anti-alpha Tubulin mouse monoclonal antibody was used to counterstain tubulin at 1/ab7291 1000 1ug/ml dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

-ve control 1: ab325241 at 1/50 dilution, followed by ab150120 Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) at 1/1000 dilution.

-ve control 2: ab7291 at 1/1000 dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Western blot - Anti-Angiogenin antibody [RM2092] (ab325241)

Angiogenin Western blot staining using rabbit Anti-Angiogenin antibody

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

This antibody does not cross-react with overexpressed mouse Angiopoietin 2, Angiopoietin 3 and Angiopoietin 4 by western blot.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

In Western blot, Anti-6X His tag® antibody [AD1.1.10] (ab15149) staining at 1/1000 dilution.

All lanes:
Western blot - Anti-Angiogenin antibody [RM2092] (ab325241) at 1/1000 dilution

Lane 1:
293T cells transfected with an empty vector containing a myc-His-tag®, whole cell lysate at 20 µg

Lane 2:
293T cells transfected with a human Angiogenin expression vector containing a myc-His-tag®, whole cell lysate at 20 µg

Lane 3:
293T cells transfected with a mouse Angiopoietin 2 expression vector containing a myc-His-tag®, whole cell lysate at 20 µg

Lane 4:
293T cells transfected with a mouse Angiopoietin 3 expression vector containing a myc-His-tag®, whole cell lysate at 20 µg

Lane 5:
293T cells transfected with a mouse Angiopoietin 4 expression vector containing a myc-His-tag®, whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 16 kDa, 36 kDa

Exposure time: 15s

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