abcam

ab317264

Anti-RAB27B antibody [EPR28647-45]

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	EPR28647-45
Purification technique	Affinity purification Protein A
Specificity	Unsuitable for mouse ICC.
Concentration	0.509 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Dot

Tested

Species	Recombinant full length protein - Human
Dilution info	1/1000
Notes	-

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

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

Not recommended

Species	Mouse, Recombinant full length protein - Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/2000
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 full length protein - Human
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/5000
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Target data

See full target information RAB27B

Function	The small GTPases Rab are key regulators of intracellular membrane trafficking, from the formation of transport vesicles to their fusion with membranes. Rabs cycle between an inactive GDP-bound form and an active GTP-bound form that is able to recruit to membranes different sets of downstream effectors directly responsible for vesicle formation, movement, tethering and fusion (PubMed:21775604, PubMed:30771381). RAB27B regulates homeostasis of late endocytic pathway, including endosomal positioning, maturation and secretion (PubMed:30771381). Plays a role in NTRK2/TRKB axonal anterograde transport by facilitating the association of NTRK2/TRKB with KLC1 (PubMed:21775604). May be involved in targeting uroplakins to urothelial apical membranes (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.

Supplementary info

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

Activity summary	RAB27B also known as Ras-related protein Rab-27B belongs to the Rab family of small GTPases and has a molecular mass of approximately 25 kDa. RAB27B is involved in intracellular vesicle trafficking processes. It is expressed in various tissues with notable expression in platelets and secretory cells. The protein cycles between GDP-bound inactive and GTP-bound active states regulates cargo delivery and maintains distinct cellular compartments.
Biological function summary	The functional role of RAB27B includes mediating the transport and exocytosis of secretory vesicles. This protein collaborates with effector molecules such as MLPH (melanophilin) as part of a multiprotein complex that facilitates vesicle membrane docking and fusion. RAB27B's activity ensures proper cellular secretion processes

	impacting hormone release pigment distribution and other essential secretory pathways.
Pathways	RAB27B participates in the exosome secretion and regulated secretory pathways. It closely interacts with other proteins including RAB27A which shares similar trafficking functions. RAB27B plays a role in specialized secretory pathways affecting the maturation and docking of vesicles in cells like melanocytes and cytotoxic T lymphocytes which are essential for efficient immune responses and pigmentation respectively.
Associated diseases and disorders	RAB27B is relevant in conditions such as cancer and Griscelli syndrome. Its dysregulation can contribute to tumor progression and metastasis due to altered vesicle trafficking and secretion dynamics. In Griscelli syndrome type 2 mutations in the related protein RAB27A although not directly in RAB27B impact melanosome transport leading to pigmentary issues and immune dysfunction. Understanding RAB27B's involvement offers insights into potential therapeutic strategies targeting these pathways.

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

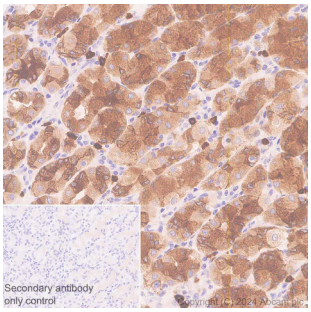
We do not recommend this combination. It is not covered by our product promise.

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.

17 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAB27B antibody [EPR28647-45] (ab317264)

Immunohistochemical analysis of paraffin-embedded Human stomach tissue labeling RAB27B with ab317264 at 1/2000 (0.255 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

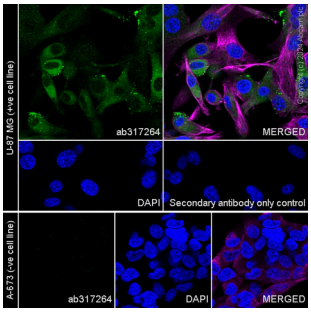
Positive staining on human stomach (PMID: 22811270). The section was incubated with ab317264 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

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

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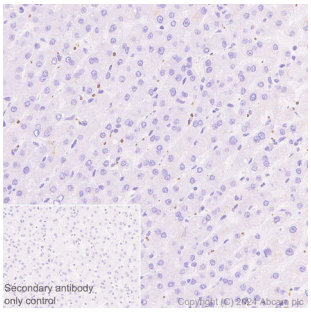
Immunocytochemistry/ Immunofluorescence - Anti-RAB27B antibody [EPR28647-45] (ab317264)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized U-87 MG (human glioblastoma-astrocytoma epithelial cell) cells labelling RAB27B with ab317264 at 1/50 (10.18 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green).

Confocal image showing cytoplasmic staining in U-87 MG cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labeled with DAPI (shown in blue).
Negative control: A-673.
Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAB27B antibody [EPR28647-45] (ab317264)

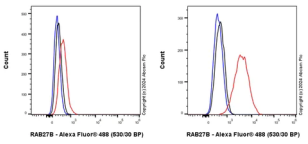
Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling RAB27B with ab317264 at 1/2000 (0.255 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression: positive staining on platelets of human liver. The section was incubated with ab317264 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).

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

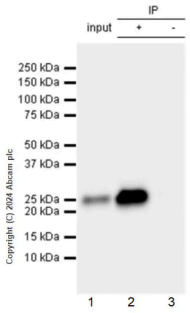


Flow Cytometry (Intracellular) - Anti-RAB27B antibody [EPR28647-45] (ab317264)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized U-87 MG (human glioblastoma-astrocytoma epithelial cell) (Right) / A-673 (human muscle Ewings sarcoma cell line) (Left) cells labelling RAB27B with ab317264 at 1/5000 dilution (0.01ug) (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.

Negative control: A-673



Immunoprecipitation - Anti-RAB27B antibody [EPR28647-45] (ab317264)

RAB27B was immunoprecipitated from 0.35 mg U-87 MG (human glioblastoma-astrocytoma epithelial cell) whole cell lysate with ab317264 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab317264 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: U-87 MG (human glioblastoma-astrocytoma epithelial cell) whole cell lysate
Lane 2: ab317264 IP in U-87 MG (human glioblastoma-astrocytoma epithelial cell) whole cell lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab317264 in U-87 MG whole cell lysate

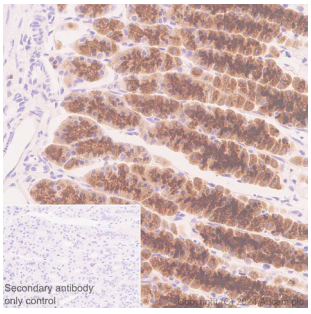
All lanes:
Immunoprecipitation - Anti-RAB27B antibody [EPR28647-45] (ab317264) at 1/30 dilution

All lanes:
U-87 MG (human glioblastoma-astrocytoma epithelial cell) whole cell lysate at 10 µg

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 6s



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAB27B antibody [EPR28647-45] (ab317264)

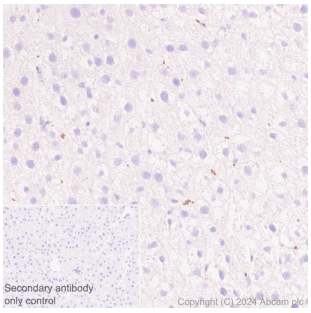
Immunohistochemical analysis of paraffin-embedded Mouse stomach tissue labeling RAB27B with ab317264 at 1/2000 (0.255 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on mouse stomach. The section was incubated with ab317264 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).

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-RAB27B antibody [EPR28647-45] (ab317264)

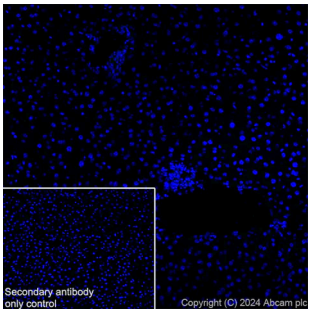
Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling RAB27B with ab317264 at 1/2000 (0.255 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression: positive staining on platelets of rat liver. The section was incubated with ab317264 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).

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



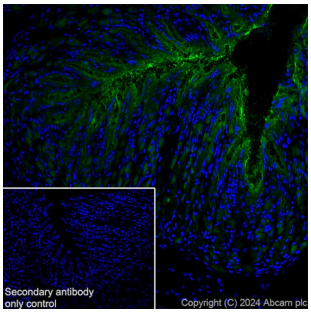
Immunohistochemistry (Frozen sections) - Anti-RAB27B antibody [EPR28647-45] (ab317264)

RAB27B Immunohistochemistry (Frozen sections) staining of Mouse liver (fresh frozen) using rabbit Anti-RAB27B antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse liver (fresh frozen) tissue labeling RAB27B with ab317264 at 1/500 (1.018 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/mL dilution (Green).

Low expression: confocal image showing no staining on mouse liver. The nuclear counterstain was DAPI (Blue). The section was incubated with ab317264 for 60 mins at room temperature. The section was then mounted using Fluoromount®.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbedat 1/1000 2 ug/mL dilution.

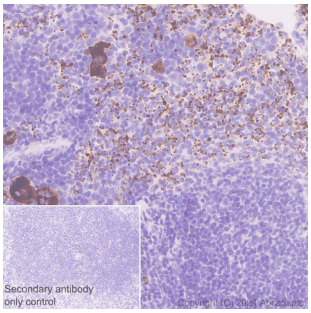


Immunohistochemistry (Frozen sections) - Anti-RAB27B antibody [EPR28647-45] (ab317264)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse stomach (fresh frozen) tissue labeling RAB27B with ab317264 at 1/500 (1.018 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/mL dilution (Green).

Confocal image showing positive staining on epithelium of mouse stomach. The nuclear counterstain was DAPI (Blue). The section was incubated with ab317264 for 60 mins at room temperature. The section was then mounted using Fluoromount®.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbedat 1/1000 2 ug/mL dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAB27B antibody [EPR28647-45] (ab317264)

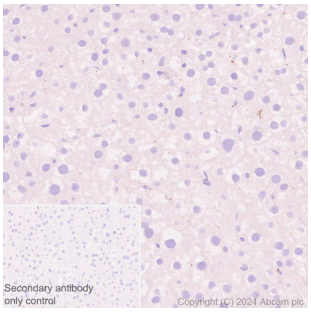
Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling RAB27B with ab317264 at 1/2000 (0.255 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on megakaryocytes and platelets in mouse spleen. The section was incubated with ab317264 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).

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-RAB27B antibody [EPR28647-45] (ab317264)

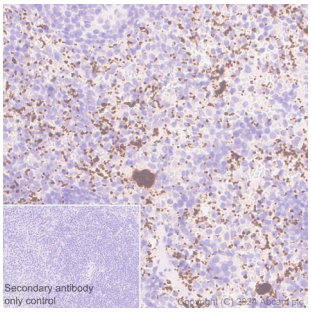
Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling RAB27B with ab317264 at 1/2000 (0.255 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression: positive staining on platelets of mouse liver. The section was incubated with ab317264 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).

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-RAB27B antibody [EPR28647-45] (ab317264)

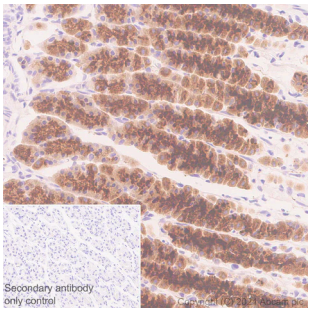
Immunohistochemical analysis of paraffin-embedded Rat spleen tissue labeling RAB27B with ab317264 at 1/2000 (0.255 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on megakaryocytes and platelets in rat spleen. The section was incubated with ab317264 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).

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-RAB27B antibody [EPR28647-45] (ab317264)

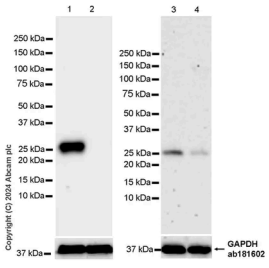
Immunohistochemical analysis of paraffin-embedded Rat stomach tissue labeling RAB27B with ab317264 at 1/2000 (0.255 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on rat stomach. The section was incubated with ab317264 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).

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



Western blot - Anti-RAB27B antibody [EPR28647-45] (ab317264)

RAB27B Western blot staining using rabbit Anti-RAB27B antibody

Negative control: A-673

Low expression: Huh7(PMID: 22553406)

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

Exposure time: Lane1-2: 15 seconds, lane3-4: 180 seconds

All lanes:
Western blot - Anti-RAB27B antibody [EPR28647-45] (ab317264) at 1/1000 dilution

Lane 1:
U-87 MG (human glioblastoma-astrocytoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
A-673 (human muscle ewing's sarcoma) whole cell lysate at 20 µg

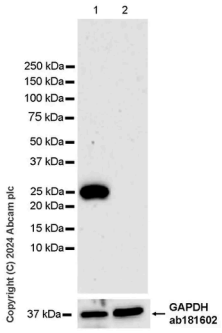
Lane 3:
LN-229 (human brain glioblastoma epithelial cell) whole cell lysate at 20 µg

Lane 4:
Huh7 (human hepatocellar carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

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

Observed band size: 25 kDa, 36 kDa



Western blot - Anti-RAB27B antibody [EPR28647-45] (ab317264)

RAB27B Western blot staining using rabbit Anti-RAB27B antibody

Low expression: liver(PMID: 14625374)

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

All lanes:
Western blot - Anti-RAB27B antibody [EPR28647-45] (ab317264) at 1/1000 dilution

Lane 1:
Rat stomach tissue lysate at 20 µg

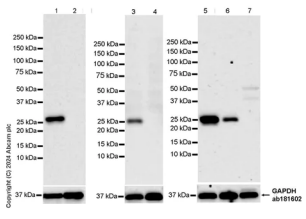
Lane 2:
Rat liver tissue lysate at 20 µg

Secondary

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

Observed band size: 25 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-RAB27B antibody [EPR28647-45] (ab317264)

RAB27B Western blot staining using rabbit Anti-RAB27B antibody

Low expression liver(PMID: 14625374)A20, F9

Lane 3-4 were developed using a higher sensitivity ECL substrate.

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

Exposure time: Lane1-2: 15 seconds, lane3-4: 180 seconds

All lanes:
Western blot - Anti-RAB27B antibody [EPR28647-45] (ab317264) at 1/1000 dilution

Lane 1:
MEF (mouse embryonic fibroblast (immortalized)) whole cell lysate at 20 µg

Lane 2:
A20 (mouse reticum sarcoma B lymphocyte) whole cell lysate at 20 µg

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

Lane 4:
F9 (mouse embryonal carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 5:
Mouse stomach tissue lysate at 20 µg

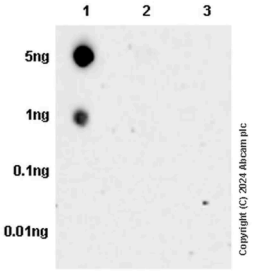
Lane 6:
Mouse brain tissue lysate at 20 µg

Lane 7:
Mouse liver tissue lysate at 20 µg

Secondary

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

Observed band size: 25 kDa, 36 kDa



Dot Blot - Anti-RAB27B antibody [EPR28647-45] (ab317264)

Dot blot analysis of RAB27B using ab317264 at 1:1000 (0.509 ug/ml) followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1:100,000 dilution.

This antibody doesn't cross-react with Human RAB27A and RAB3A.

All lanes:
Dot Blot - Anti-RAB27B antibody [EPR28647-45] (ab317264) at 1/1000 dilution

Lane 1:
His-tagged Human RAB27B protein

Lane 2:
Human RAB27A protein

Lane 3:
His-tagged Human RAB3A 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'.