abcam

ab308631

Anti-GATAD2B antibody [EPR27329-3]

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	EPR27329-3
Purification technique	Affinity purification Protein A
Concentration	0.504 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

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

Species	Human

Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
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	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/100
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	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	1/50
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	1/50
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Species	Mouse
Dilution info	1/30
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

Target data

See full target information GATAD2B

Function	Transcriptional repressor (PubMed:12183469, PubMed:16415179). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:16428440, PubMed:28977666). Enhances MBD2-mediated repression (PubMed:12183469, PubMed:16415179). Efficient repression requires the presence of GATAD2A (PubMed:16415179). Targets MBD3 to discrete loci in the nucleus (PubMed:11756549). May play a role in synapse development (PubMed:23644463).

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	GATAD2B also known as p66β is a protein which forms part of the nucleosome remodeling and deacetylase (NuRD) complex. The protein has a mass of approximately 66 kDa. It is expressed in various human tissues including brain and skeletal muscle. GATAD2B plays a vital role in transcriptional repression by recruiting chromatin remodeling factors which influence gene expression regulation.
Biological function summary	GATAD2B influences chromatin structure and gene expression. It functions as an integral component of the NuRD complex which combines ATP-dependent chromatin remodeling with histone deacetylase activity. The interaction of GATAD2B with other NuRD components such as MBD2 and CHD3 demonstrates its role in modifying the accessibility of DNA to transcription factors impacting cellular activities like differentiation.
Pathways	Other components of the NuRD complex work together with GATAD2B in the regulation of the Wnt signaling pathway and the Notch signaling pathway. These pathways are important for cellular proliferation and differentiation. GATAD2B has functional connections with other proteins including REST and HDAC1 and these connections indicate its involvement in these pathways that shape developmental processes and cellular responses.
Associated diseases and disorders	GATAD2B is significant in connection with neurodevelopmental disorders. Pathogenic mutations in the GATAD2B gene have been linked to GATAD2B-associated neurodevelopmental disorder. It is also associated with intellectual disability syndromes. GATAD2B shows interactions with proteins such as TCF4 and SMARCA2 which are also linked to similar neurodevelopmental conditions illustrating its impact on brain function and development.

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

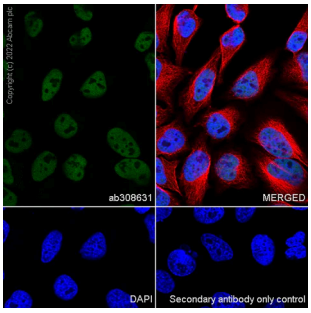
We do not recommend this combination. It is not covered by our product promise.

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.

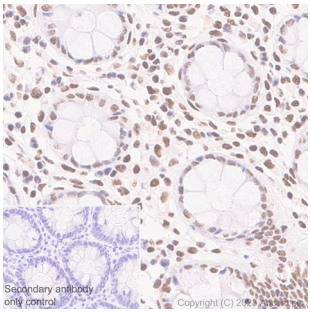
16 product images



Immunocytochemistry/ Immunofluorescence - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

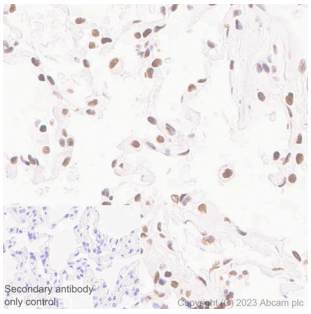
GATAD2B Immunocytochemistry/ Immunofluorescence staining of HeLa cell line using rabbit Anti-GATAD2B antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling GATAD2B with ab308631 at 1/50 (10.08 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 nuclear staining in HeLa cell line.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 (Red). 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.



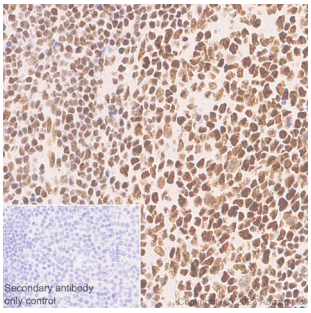
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

Immunohistochemical analysis of paraffin-embedded Human colon tissue labelling GATAD2B with ab308631 at 1/100 (5.04 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on human colon.The section was incubated with ab308631 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



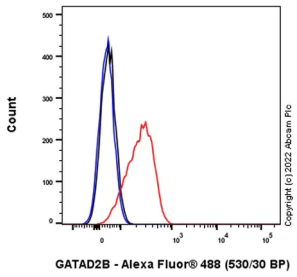
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

Immunohistochemical analysis of paraffin-embedded Human lung tissue labelling GATAD2B with ab308631 at 1/100 (5.04 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on human lung (PMID: 12183469).The section was incubated with ab308631 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



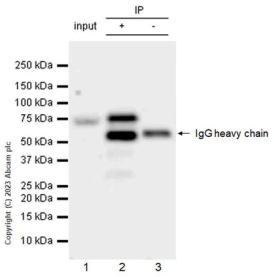
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labelling GATAD2B with ab308631 at 1/100 (5.04 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on human tonsil.The section was incubated with ab308631 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-GATAD2B antibody [EPR27329-3] (ab308631)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling GATAD2B with ab308631 at 1/50 dilution (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). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

GATAD2B was immunoprecipitated from 0.35 mg HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate with ab308631at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab308631 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate
Lane 2: ab308631 IP in HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab308631 in HeLa whole cell lysate

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

Exposure time: 50 seconds

Lysate was freshly made and used for Immunoprecipitation immediately to minimize protein degradation.

All lanes:
Immunoprecipitation - Anti-GATAD2B antibody [EPR27329-3] (ab308631) at 1/1000 dilution

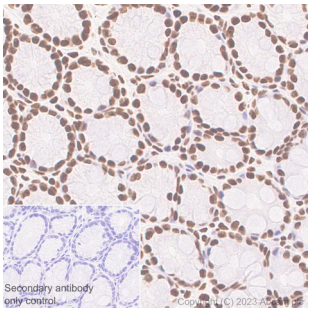
All lanes:
HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 10 µg

Secondary

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

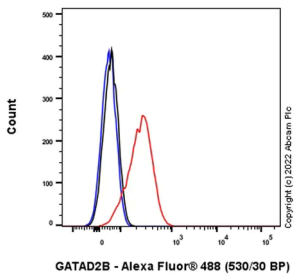
Observed band size: 72 kDa

Exposure time: 50s



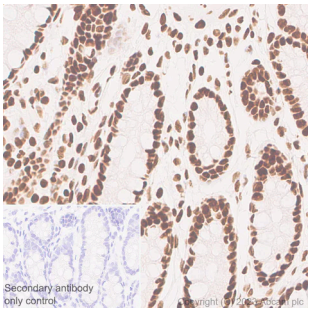
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

Immunohistochemical analysis of paraffin-embedded Mouse colon tissue labelling GATAD2B with ab308631 at 1/100 (5.04 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on mouse colon.The section was incubated with ab308631 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



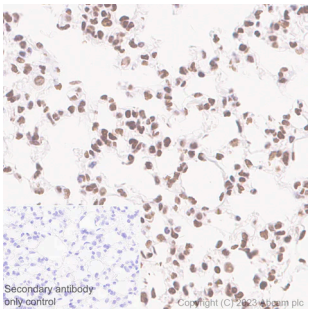
Flow Cytometry (Intracellular) - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling GATAD2B with ab308631 at 1/50 dilution (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). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



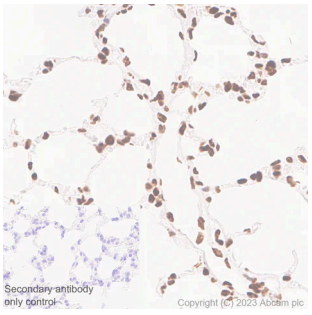
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

Immunohistochemical analysis of paraffin-embedded Rat colon tissue labelling GATAD2B with ab308631 at 1/100 (5.04 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on rat colon.The section was incubated with ab308631 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-GATAD2B antibody [EPR27329-3] (ab308631)

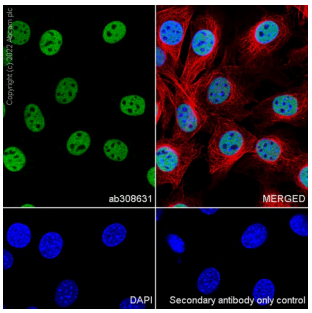
Immunohistochemical analysis of paraffin-embedded Mouse lung tissue labelling GATAD2B with ab308631 at 1/100 (5.04 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on mouse lung.The section was incubated with ab308631 for 30 mins at room temperature. The 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-GATAD2B antibody [EPR27329-3] (ab308631)

Immunohistochemical analysis of paraffin-embedded Rat lung tissue labelling GATAD2B with ab308631 at 1/100 (5.04 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on rat lung.The section was incubated with ab308631 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

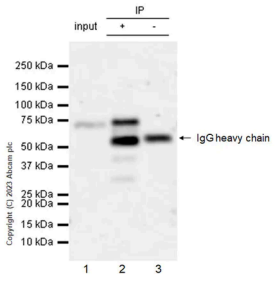
antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunocytochemistry/ Immunofluorescence - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

GATAD2B Immunocytochemistry/ Immunofluorescence staining of NIH/3T3 cell line using rabbit Anti-GATAD2B antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling GATAD2B with ab308631 at 1/50 (10.08 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 nuclear staining in NIH/3T3 cell line.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 (Red). 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.



Immunoprecipitation - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

GATAD2B was immunoprecipitated from 0.35 mg NIH/3T3 (mouse embryonic fibroblast) whole cell lysate with ab308631 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab308631 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: NIH/3T3 (mouse embryonic fibroblast) whole cell lysate
Lane 2: ab308631 IP in NIH/3T3 (mouse embryonic fibroblast) whole cell lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab308631 in NIH/3T3 whole cell lysate

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

Exposure time: 84 seconds

Lysate was freshly made and used for Immunoprecipitation immediately to minimize protein degradation.

All lanes:
Immunoprecipitation - Anti-GATAD2B antibody [EPR27329-3] (ab308631) at 1/1000 dilution

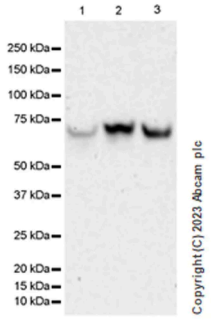
All lanes:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 10 µg

Secondary

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

Observed band size: 72 kDa

Exposure time: 84s



Western blot - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
This blot was developed using a high sensitivity ECL substrate. The high-sensitivity ECL substrate used allows for the detection of proteins in the mid-femtogram range.

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation.

All lanes:
Western blot - Anti-GATAD2B antibody [EPR27329-3] (ab308631) at 1/1000 dilution

Lane 1:
293T (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Lane 2:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate, at 20 µg

Lane 3:
PC-12 (rat adrenal gland pheochromocytoma cell) whole cell lysate at 20 µg

Secondary

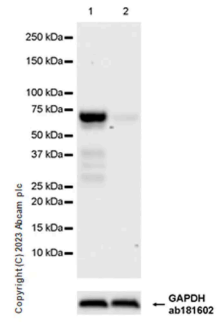
All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Developed using the ECL technique.

Predicted band size: 65 kDa

Observed band size: 72 kDa

Exposure time: 180s



Western blot - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
This blot was developed using a high sensitivity ECL substrate. The high-sensitivity ECL substrate used allows for the detection of proteins in the mid-femtogram range.

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation.

In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200,000 dilution.

All lanes:
Western blot - Anti-GATAD2B antibody [EPR27329-3] (ab308631) 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 GATAD2B whole cell lysate at 20 µg

Secondary

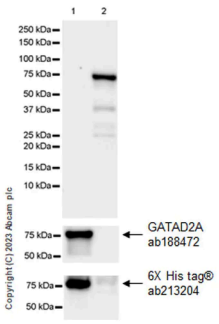
All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Developed using the ECL technique.

Predicted band size: 65 kDa

Observed band size: 72 kDa

Exposure time: 48s



Western blot - Anti-GATAD2B antibody [EPR27329-3] (ab308631)

Blocking and diluting buffer and concentration: 5% NFDM/TBST. This antibody does not cross-react with human GATAD2A. In Western blot, anti-GATAD2A antibody (ab188472) staining at 1/1000 dilution, anti-His antibody (ab213204) staining at 1/5000 dilution. Exposure time: 37 seconds
All lanes:
Western blot - Anti-GATAD2B antibody [EPR27329-3] (ab308631) at 1/1000 dilution

Lane 1:
His-tagged human GATAD2A recombinant protein at 20 µg

Lane 2:
His-tagged human GATAD2B recombinant protein at 20 µg

Secondary

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

Predicted band size: 65 kDa

Observed band size: 72 kDa

Exposure time: 37s

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