abcam

ab150404

Anti-Zic2 antibody [EPR7790]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR7790
Purification technique	Affinity purification Protein A
Specificity	This antibody detects a 70kDa extra band in some cell lines.
Concentration	0.615 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	For unpurified use at 1/500 dilution.

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	This antibody detects a 70kDa extra band in some cell lines.

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	This antibody detects a 70kDa extra band in some cell lines.

Species	Human
Dilution info	1/1000 - 1/10000
Notes	This antibody detects a 70kDa extra band in some cell lines.

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/600

Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.For unpurified use at 1/1000.

Expected

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

Target data

See full target information ZIC2

Function	Acts as a transcriptional activator or repressor. Plays important roles in the early stage of organogenesis of the CNS. Activates the transcription of the serotonin transporter SERT in uncrossed ipsilateral retinal ganglion cells (iRGCs) to refine eye-specific projections in primary visual targets. Its transcriptional activity is repressed by MDFIC. Involved in the formation of the ipsilateral retinal projection at the optic chiasm midline. Drives the expression of EPHB1 on ipsilaterally projecting growth cones. Binds to the minimal GLI-consensus sequence 5'-TGGGTGGTC-3'. Associates to the basal SERT promoter region from ventrotemporal retinal segments of retinal embryos.

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	Zic2 also called Zinc finger protein of cerebellum 2 represents a transcription factor notable for its role in the regulation of gene expression. Mechanically Zic2 binds to DNA sequences via its zinc finger domains facilitating transcriptional activation or repression depending on the context. This protein has an approximate molecular mass of 60 kDa and exhibits expression mainly in the developing central nervous system. Zic2 shows high levels of expression in postmitotic neurons and various embryonic tissues indicating its involvement in central neural developmental processes.
Biological function summary	Zic2 impacts the differentiation and proliferation of neural progenitor cells. Zic2 functions as part of a transcriptional regulatory complex collaborating with other partners to control genes necessary for neurodevelopment. Its activity supports the specification of neuronal identity and axonal pathfinding. Studies demonstrate its important role in guiding axons to their correct targets a function integral during the formation of neural circuits. Zic2-mediated transcriptional networks are essential for accurate neuronal patterning in the central nervous system.
Pathways	Several interactions revolving around Zic2 play essential roles. Zic2 is involved in the Sonic Hedgehog (Shh) signaling pathway where it contributes to the transcriptional response important for patterning activities. Within the Shh pathway Zic2 interacts with downstream components like Gli proteins which modulate target gene expression based on signal gradient. Additionally Zic2 participates in the Wnt signaling pathway where it influences cell fate determination and tissue polarity. Such pathways highlight its part in developmental processes and cellular differentiation.
Associated diseases and disorders	Mutations or dysregulation of Zic2 often associate with congenital malformations such as holoprosencephaly and mirror movement disorder. These disorders arise from disrupted neural development reflecting Zic2's key roles in morphogenesis and patterning. Both conditions involve abnormal neurodevelopment where altered Zic2 interactions with proteins such as Gli3 result in impaired signaling cascades. Understanding these connections helps clarify Zic2's contribution to pathological states offering insights into potential therapeutic targets.

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.

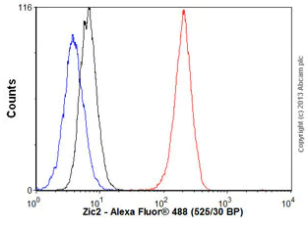
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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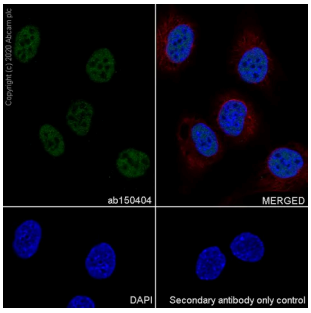
9 product images



Flow Cytometry (Intracellular) - Anti-Zic2 antibody [EPR7790] (ab150404)

Zic2 Flow Cytometry (Intracellular) staining using rabbit Anti-Zic2 antibody

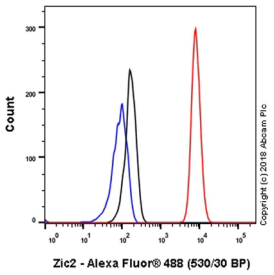
Overlay histogram showing SH-SY5Y cells stained with unpurified ab150404 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (unpurified ab150404, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunocytochemistry/ Immunofluorescence - Anti-Zic2 antibody [EPR7790] (ab150404)

Zic2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Zic2 antibody

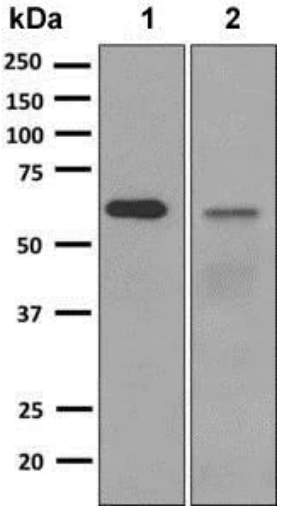
Immunocytochemistry analysis of SK-OV-3 (human ovarian cancer epithelial cell)cells labelling Zic2 with ab150404 at 2.5 µg/ml. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/1000 was used as the secondary antibody (green). Cells were counterstained with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red). Nuclear DNA was labelled with DAPI (blue).



Flow Cytometry (Intracellular) - Anti-Zic2 antibody [EPR7790] (ab150404)

Zic2 Flow Cytometry (Intracellular) staining using rabbit Anti-Zic2 antibody

Intracellular Flow Cytometry analysis of SH-SY5Y (Human neuroblastoma epithelial cell) cells labeling Zic2 with purified ab150404 at 1/600 dilution (1µg/ml) (red). Cells were fixed with 80% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-Zic2 antibody [EPR7790] (ab150404)

Zic2 Western blot staining using rabbit Anti-Zic2 antibody

All lanes:
Western blot - Anti-Zic2 antibody [EPR7790] (ab150404) at 1/1000 dilution

Lane 1:
Human fetal brain lysate at 10 µg

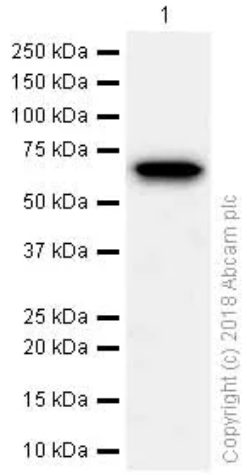
Lane 2:
Human cerebellum lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 55 kDa

Observed band size: ~63 kDa



Western blot - Anti-Zic2 antibody [EPR7790] (ab150404)

Zic2 Western blot staining of Human fetal brain lysates using rabbit Anti-Zic2 antibody

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

All lanes:
Western blot - Anti-Zic2 antibody [EPR7790] (ab150404) at 1/15000 dilution

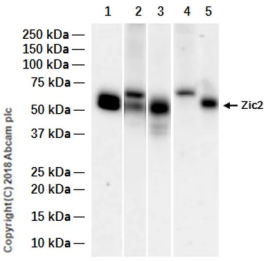
All lanes:
Human fetal brain lysates at 15 µg

Secondary

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

Predicted band size: 55 kDa

Observed band size: 63 kDa



Western blot - Anti-Zic2 antibody [EPR7790] (ab150404)

Zic2 Western blot staining using rabbit Anti-Zic2 antibody

Exposure time:
Lane1: 3.25 seconds
Lane2: 20 seconds
Lane3: 5.5 seconds
Lane4-5: 60 seconds

Diluting/Blocking buffer and concentration: 5% NFDM/TBST

ab150404 detects an 70kDa extra band in some cell lines. The expression profile observed in U-87 MG is consistent with the literature (PMID: 11038359). Negative control: U-87 MG (PMID: 11038359)

All lanes:
Western blot - Anti-Zic2 antibody [EPR7790] (ab150404) at 1/500 dilution

Lane 1:
Human fetal brain tissue lysate at 20 µg

Lane 2:
PANC-1 (Human pancreatic epithelioid carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
SK-OV-3 (Human ovarian cancer epithelial cell) whole cell lysate at 20 µg

Lane 4:
U-87 MG (Human glioblastoma-astrocytoma epithelial cell) whole cell lysate at 20 µg

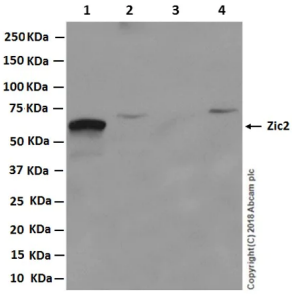
Lane 5:
Mouse embryo tissue lysate at 20 µg

Secondary

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

Predicted band size: 55 kDa

Observed band size: 56 kDa



Western blot - Anti-Zic2 antibody [EPR7790] (ab150404)

Zic2 Western blot staining using rabbit Anti-Zic2 antibody

Diluting/Blocking buffer and concentration: 5% NFDM/TBST
It detects an 70kDa extra band in some cell lines.

All lanes:
Western blot - Anti-Zic2 antibody [EPR7790] (ab150404) at 1/2000 dilution

Lane 1:
Human fetal brain tissue lysate at 20 µg

Lane 2:
SH-SY5Y (Human neuroblastoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
C6 (Rat glial tumor glial cell) whole cell lysate at 20 µg

Lane 4:
Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

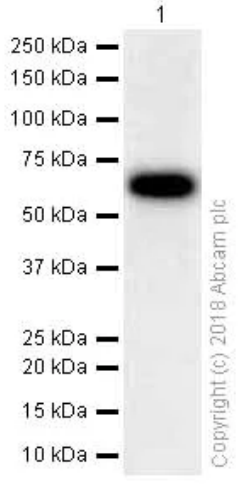
Secondary

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

Predicted band size: 25 kDa, 55 kDa

Observed band size: 28 kDa, 56 kDa

Exposure time: 3min



Western blot - Anti-Zic2 antibody [EPR7790] (ab150404)

Zic2 Western blot staining of Mouse brain lysates using rabbit Anti-Zic2 antibody

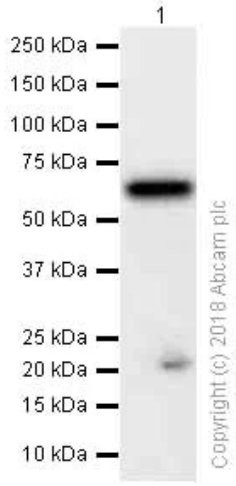
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Western blot - Anti-Zic2 antibody [EPR7790] (ab150404) at 1/5000 dilution

All lanes:
Mouse brain lysates at 15 µg

Secondary

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



Western blot - Anti-Zic2 antibody [EPR7790] (ab150404)

Zic2 Western blot staining of Rat brain lysate using rabbit Anti-Zic2 antibody

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

All lanes:
Western blot - Anti-Zic2 antibody [EPR7790] (ab150404) at 1/20000 dilution

All lanes:
Rat brain lysate at 15 µg

Secondary

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

Predicted band size: 55 kDa

Observed band size: 63 kDa

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