abcam

ab92326

Anti-Otx2 antibody [EPR3348]

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	EPR3348
Purification technique	Affinity purification Protein A
Concentration	0.104 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Species	Mouse

Dilution info	1/1000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
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	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

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

IHC-Fr

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Target data

See full target information OTX2

Function	Transcription factor probably involved in the development of the brain and the sense organs. Can bind to the bicoid/BCD target sequence (BTS): 5'-TCTAATCCC-3'.

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	Stable for 12 months at -20°C

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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	Otx2 also known as Orthodenticle homeobox 2 is a transcription factor involved in the regulation of gene expression. With a mass of approximately 34 kDa it expresses mainly in the brain and eyes during embryonic development. Otx2 plays a central role in early patterning of the head and is essential for the development of structures such as the brain and retina. During adulthood its expression continues although in a more restricted manner within specific regions of the brain.
Biological function summary	Otx2 regulates the expression of genes necessary for cell differentiation and organ development. It functions as part of transcriptional complexes that control specific patterns of development in the central nervous system. This protein helps in maintaining the regional identity of cells ensuring the proper formation and function of neural tissues. By influencing key developmental processes Otx2 shapes the intricate architecture of the brain and contributes to its complexity.
Pathways	Otx2 integrates into the Wnt signaling and Hedgehog pathways which are critical for early embryonic development. It interacts with proteins such as Pax6 and En1 within these pathways to modulate developmental signals and maintain proper cellular functions. Through precise regulation of these pathways Otx2 ensures coordinated developmental processes that establish proper tissue and organ formation.
Associated diseases and disorders	Otx2 plays an important role in certain developmental eye disorders and brain structural defects. Mutations or malfunctions in Otx2 expression can lead to conditions such as anophthalmia or microphthalmia and pituitary gland abnormalities. Otx2's interplay with proteins like Pax6 is significant in these disorders as disruptions in their functions can result in profound developmental consequences highlighting the importance of Otx2 in ocular and neurological health.

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.

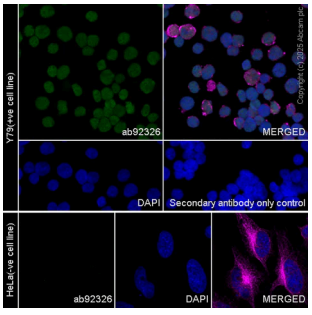
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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7 product images



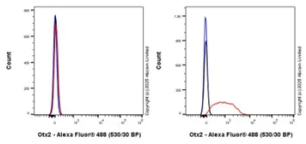
Immunocytochemistry/ Immunofluorescence - Anti-Otx2 antibody [EPR3348] (ab92326)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Y79 (human retinoblastoma cell) cells labelling Otx2 with ab92326 at 1/500 (2.098 µg/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 µg/ml) dilution (Green).

Confocal image showing nuclear staining in Y79 cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labeled with DAPI (shown in blue).
Negative control: HeLa (PMID: 12559959).
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 (2.5 µg/ml) dilution (Magenta).

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

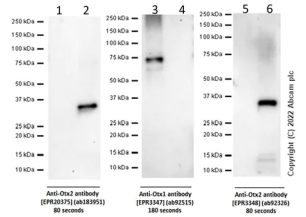


Flow Cytometry (Intracellular) - Anti-Otx2 antibody [EPR3348] (ab92326)

Flow cytometric analysis of 4% paraformaldehyde fixed 0.1% Tween-20l permeabilized HeLa (human cervical adenocarcinoma epithelial cell, Left) / Y79(human retinoblastoma cell, Right) cells labelling Otx2 with ab92326 at 1/1000 dilution (0.01µg) (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: HeLa (PMID: 12559959).



Western blot - Anti-Otx2 antibody [EPR3348] (ab92326)

Otx2 Western blot staining using rabbit Anti-Otx2 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Lanes 1 - 2:
Western blot - Anti-Otx2 antibody [EPR20375] (ab183951) at 1/1000 dilution

Lanes 3 - 4:
Western blot - Anti-Otx1 antibody [EPR3347] (ab92515) at 1/1000 dilution

Lanes 5 - 6:
Western blot - Anti-Otx2 antibody [EPR3348] (ab92326) at 1/1000 dilution

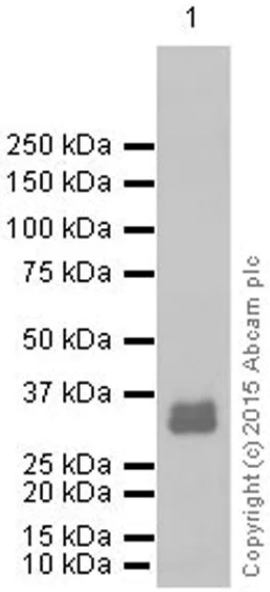
Lanes 1, 3 and 5:
GST-tagged Human OTX1 full length recombinant protein at 10 ng

Lanes 2, 4 and 6:
His-tagged Human OTX2 full length recombinant protein at 10 ng

Secondary

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

Observed band size: 35 kDa, 75 kDa



Western blot - Anti-Otx2 antibody [EPR3348] (ab92326)

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Otx2 antibody [EPR3348] (ab92326) at 1/1000 dilution

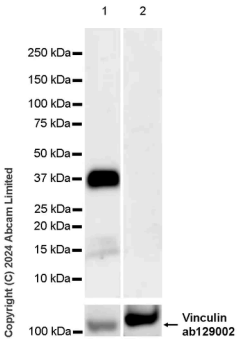
All lanes:
Y79 cell lysate at 10 µg

Secondary

All lanes:
HRP goat anti-rabbit IgG (H+L) at 1/20000 dilution

Predicted band size: 32 kDa

Observed band size: 32 kDa



Western blot - Anti-Otx2 antibody [EPR3348] (ab92326)

Otx2 Western blot staining using rabbit Anti-Otx2 antibody

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

ab129002 was used as a Vinculin loading control at a 1/10000 dilution.

Negative control: spleen
The membrane was incubated with ab92326 at 4° overnight.
All lanes:
Western blot - Anti-Otx2 antibody [EPR3348] (ab92326) at 1/1000 dilution

Lane 1:
Mouse retina tissue lysate at 20 µg

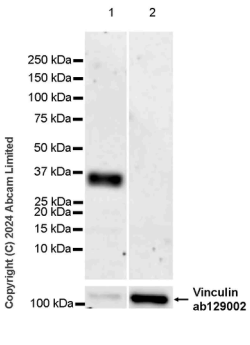
Lane 2:
Mouse spleen tissue lysate at 20 µg

Secondary

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

Observed band size: 36 kDa

Exposure time: 70s



Western blot - Anti-Otx2 antibody [EPR3348] (ab92326)

Otx2 Western blot staining using rabbit Anti-Otx2 antibody

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

ab129002 was used as a Vinculin loading control at a 1/10000 dilution.

Negative control: spleen
All lanes:
Western blot - Anti-Otx2 antibody [EPR3348] (ab92326) at 1/1000 dilution

Lane 1:
Rat retina tissue lysate at 20 µg

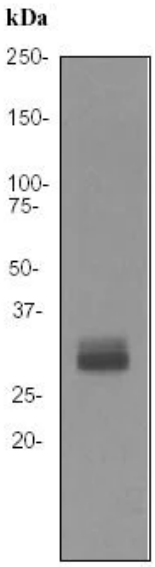
Lane 2:
Rat spleen tissue lysate at 20 µg

Secondary

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

Observed band size: 32 kDa

Exposure time: 147s



Western blot - Anti-Otx2 antibody [EPR3348] (ab92326)

All lanes:
Western blot - Anti-Otx2 antibody [EPR3348] (ab92326) at 1/1000 dilution

All lanes:
Y79 cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit IgG at 1/1000 dilution

Predicted band size: 32 kDa

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