abcam

ab242133

Anti-Iroquois homeobox protein 3/IRX3 antibody [EPR22709-52]

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	EPR22709-52
Purification technique	Affinity purification Protein A
Concentration	0.533 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

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

Species	Transfected cell line - Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Transfected cell line - Mouse
Dilution info	1/500
Notes	-

Expected

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

Not recommended

Species	Human
Dilution info	-

Notes	-

ICC/IF

Tested

Species	Transfected cell line - Mouse
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Human
Dilution info	-
Notes	-

IP

Not recommended

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

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Not recommended

Species	Human, Transfected cell line - Mouse
Dilution info	-
Notes	-

IHC-Fr

Not recommended

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

Target data

See full target information Irx3

Function	Transcription factor involved in SHH-dependent neural patterning (PubMed:10830170, PubMed:15201216). Together with NKX2-2 and NKX6-1 acts to restrict the generation of motor neurons to the appropriate region of the neural tube (PubMed:10830170, PubMed:15201216). Belongs to the class I proteins of neuronal progenitor factors, which are repressed by SHH signals (PubMed:10830170, PubMed:15201216). Involved in the transcriptional repression of MNX1 in non-motor neuron cells (PubMed:15201216). Acts as a regulator of energy metabolism (PubMed:24646999).

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	Iroquois homeobox protein 3 also known as IRX3 is a transcription factor that plays a role in gene expression regulation. IRX3 weighs approximately 57 kDa. It is expressed in various tissues prominently in the brain heart and skeletal muscle. IRX3 participates in a network of transcription factors that regulates developmental processes and cellular differentiation.
Biological function summary	IRX3 serves an important role in the regulation of embryonic pattern formation. It is a part of the Iroquois homeobox gene family which is involved in the development of distinct anatomical regions during embryogenesis. IRX3 assists in determining body structure and organ formation and forms part of transcriptional complexes that guide the spatial organization of tissues. This protein also interacts with other homeobox proteins to accomplish its roles in development and differentiation.
Pathways	IRX3 integrates into several essential developmental signaling cascades. It is involved in the Wnt signaling pathway influential in cell fate determination embryonic development and homeostasis of adult tissues. In addition IRX3 links with the Hedgehog signaling pathway integral to developmental processes. It functions alongside other proteins such as IRX5 to modulate these pathways' activities illustrating its role in complex gene interactions and signaling networks.
Associated diseases and disorders	Studies connect IRX3 to obesity and metabolic syndrome. Variations in the gene locus near IRX3 significantly impact fat distribution and insulin sensitivity. IRX3

may also associate with cardiac disorders as alterations in its expression levels are influenced by its role in heart development. IRX3 interacts with proteins like FTO showing a direct link to metabolic phenotypes and their pathological manifestations.

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

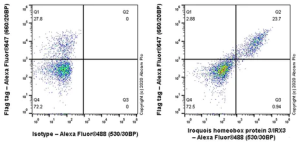
We do not recommend this combination. It is not covered by our product promise.

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.

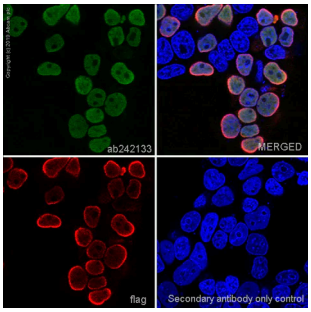
7 product images



Flow Cytometry (Intracellular) - Anti-Iroquois homeobox protein 3/IRX3 antibody [EPR22709-52] (ab242133)

Iroquois homeobox protein 3/IRX3 Flow Cytometry (Intracellular) staining using rabbit Anti-Iroquois homeobox protein 3/IRX3 antibody

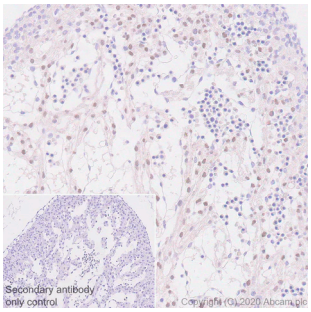
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HEK-293T (Human embryonic kidney epithelial cell) (transfected with Flag-tagged mouse IRX3 expression vector) cells labelling Iroquois homeobox protein 3/IRX3 with ab242133 at 1/500 dilution (0.1ug) (Right) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Left). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-Iroquois homeobox protein 3/IRX3 antibody [EPR22709-52] (ab242133)

Iroquois homeobox protein 3/IRX3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Iroquois homeobox protein 3/IRX3 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HEK-293T cells (transfected with Flag-tagged mouse IRX3 expression vector) labelling Iroquois homeobox protein 3/IRX3 with ab242133 at 1/50 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in 293T cells transfected with Flag-tagged IRX3 expression vector. is observed. Anti-FLAG mouse monoclonal antibody was used at 1/500 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

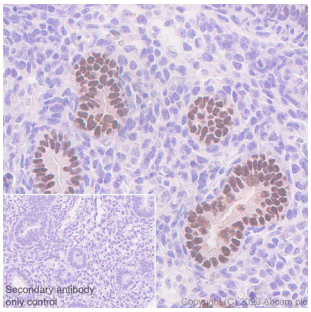


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iroquois homeobox protein 3/IRX3 antibody [EPR22709-52] (ab242133)

Iroquois homeobox protein 3/IRX3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Iroquois homeobox protein 3/IRX3 antibody

Immunohistochemical analysis of paraffin-embedded Rat E14.5 heart tissue labeling Iroquois homeobox protein 3/IRX3 with ab242133 at 1/100 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on heart of rat E14.5. The section was incubated with ab242133 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

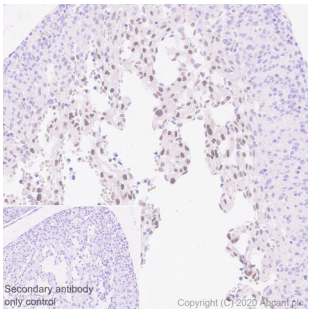


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iroquois homeobox protein 3/IRX3 antibody [EPR22709-52] (ab242133)

Iroquois homeobox protein 3/IRX3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Iroquois homeobox protein 3/IRX3 antibody

Immunohistochemical analysis of paraffin-embedded Mouse E14.5 lung tissue labeling Iroquois homeobox protein 3/IRX3 with ab242133 at 1/100 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on lung of mouse E14.5 (PMID: 11520674). The section was incubated with ab242133 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

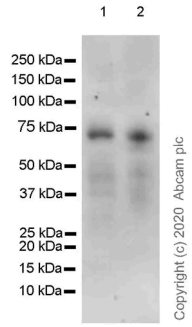


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Iroquois homeobox protein 3/IRX3 antibody [EPR22709-52] (ab242133)

Iroquois homeobox protein 3/IRX3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Iroquois homeobox protein 3/IRX3 antibody

Immunohistochemical analysis of paraffin-embedded Mouse E14.5 heart tissue labeling Iroquois homeobox protein 3/IRX3 with ab242133 at 1/100 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on heart of mouse E14.5 (PMID: 15342473, PMID: 11520674). The section was incubated with ab242133 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Western blot - Anti-Iroquois homeobox protein 3/IRX3 antibody [EPR22709-52] (ab242133)

Iroquois homeobox protein 3/IRX3 Western blot staining using rabbit Anti-Iroquois homeobox protein 3/IRX3 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
This blot was developed using a higher sensitivity ECL substrate.

Exposure time: 125 seconds.

All lanes:
Western blot - Anti-Iroquois homeobox protein 3/IRX3 antibody [EPR22709-52] (ab242133) at 1/1000 dilution

Lane 1:
Mouse E17 embryo tissue lysate at 40 µg

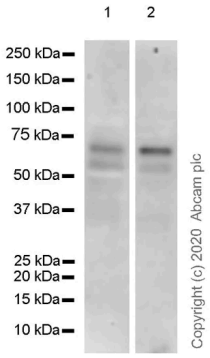
Lane 2:
Rat E17 brain (primary culture) tissue lysate at 40 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/50000 dilution

Predicted band size: 52 kDa

Observed band size: 70 kDa



Western blot - Anti-Iroquois homeobox protein 3/IRX3 antibody [EPR22709-52] (ab242133)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
This blot was developed using a higher sensitivity ECL substrate.

Exposure time: 3 minutes.

All lanes:
Western blot - Anti-Iroquois homeobox protein 3/IRX3 antibody [EPR22709-52] (ab242133) at 1/1000 dilution

Lane 1:
Mouse embryo tissue lysate at 40 µg

Lane 2:
Mouse E14.5 lung tissue lysate at 40 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 52 kDa

Observed band size: 70 kDa

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