abcam

ab249781

Anti-MEIS2 antibody [EPR12100] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR12100
Purification technique	Affinity purification
Specificity	The immunogen of this antibody is, according to BLAST results, highly conserved (93%) with human MEIS1. According to this, the antibody is very likely to cross-react with MEIS1 but this has, to our knowledge, not been experimentally tested so far.

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat

Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human

Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information MEIS2

Function

Involved in transcriptional regulation. Binds to HOX or PBX proteins to form dimers, or to a DNA-bound dimer of PBX and HOX proteins and thought to have a role in stabilization of the homeoprotein-DNA complex. Isoform 3 is required for the activity of a PDX1:PBX1b:MEIS2b complex in pancreatic acinar cells involved in the transcriptional activation of the ELA1 enhancer; the complex binds to the enhancer B element and cooperates with the transcription factor 1 complex (PTF1) bound to the enhancer A element; MEIS2 is not involved in complex DNA-binding. Probably in complex with PBX1, is involved in transcriptional regulation by KLF4. Isoform 3 and isoform 4 can bind to a EPHA8 promoter sequence containing the DNA motif 5'-CGGTCA-3'; in cooperation with a PBX protein (such as PBX2) is proposed to be involved in the transcriptional activation of EPHA8 in the developing midbrain. May be involved in regulation of myeloid differentiation. Can bind to the DNA sequence 5'-TGACAG-3'in the activator ACT sequence of the D(1A) dopamine receptor (DRD1) promoter and activate DRD1 transcription; isoform 5 cannot activate DRD1 transcription.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab249781 is the carrier-free version of ab174270.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	MEIS2 or Myeloid Ecotropic Viral Integration Site 2 is a transcription factor known for its role in gene regulation. This protein weighs approximately 52-54 kDa and participates in DNA binding. MEIS2 is highly expressed in tissues like the brain heart and kidneys especially during developmental stages. MEIS2 functions through direct interaction with genomic regions to regulate the transcription of target genes.
Biological function summary	MEIS2 influences cell differentiation and organ development. It interacts with other proteins as part of a complex including the HOX and PBX families to fine-tune transcriptional outcomes. MEIS2 plays a role in neuronal development where its activity helps shape the neural tissue architecture. Researchers observe that MEIS2 affects cellular processes important for forming correctly structured organs.
Pathways	MEIS2 is engaged in the retinoic acid signaling pathway and the Notch signaling pathway. These pathways are vital in embryonic development and cellular differentiation. MEIS2's interaction with the PBX1 protein demonstrates its importance in pathways that lead to precise gene expression during development. Together they contribute to regulating the transcriptional networks involved in developmental processes.

Associated diseases and disorders	MEIS2 has links to certain developmental disorders and cancers. Mutations or aberrant expression of MEIS2 correlate with conditions like cleft palate and neuroblastoma. Notably its interaction with the HOXA9 protein has been documented in certain types of leukemia showing how MEIS2-related pathways can contribute to abnormal cell proliferation. Understanding these interactions aids research into potential targets for therapeutic intervention.

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

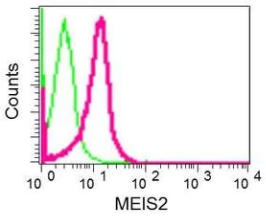
We do not recommend this combination. It is not covered by our product promise.

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.

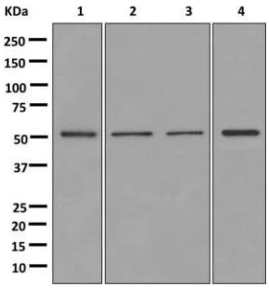
2 product images



Flow Cytometry (Intracellular) - Anti-MEIS2 antibody [EPR12100] - BSA and Azide free (ab249781)

MEIS2 Flow Cytometry (Intracellular) staining using rabbit Anti-MEIS2 antibody

This data was developed using ab174270, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized K562 cells using ab174270 at a 1/10 dilution (red) or a rabbit IgG (negative) (green).



Western blot - Anti-MEIS2 antibody [EPR12100] - BSA and Azide free (ab249781)

This data was developed using ab174270, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-MEIS2 antibody [EPR12100] (ab174270) at 1/1000 dilution

Lane 1:
Fetal thymus lysates at 10 µg

Lane 2:
HeLa lysates at 10 µg

Lane 3:
HepG2 lysates at 10 µg

Lane 4:
K562 lysates at 10 µg

Predicted band size: 52 kDa

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