abcam

ab230894

Anti-JHDM1D antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human KDM7A aa 250 to C-terminus conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link Q6ZMT4
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Predicted

Species	Mouse

Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information KDM7A

Function	Histone demethylase required for brain development. Specifically demethylates dimethylated 'Lys-9', 'Lys-27' and 'Lys-36' (H3K9me2, H3K27me2, H3K36me2, respectively) of histone H3 and monomethylated histone H4 'Lys-20' residue

(H4K20Me1), thereby playing a central role in histone code (PubMed:20023638, PubMed:20622853). Specifically binds trimethylated 'Lys-4' of histone H3 (H3K4me3), affecting histone demethylase specificity: in presence of H3K4me3, it has no demethylase activity toward H3K9me2, while it has high activity toward H3K27me2. Demethylates H3K9me2 in absence of H3K4me3 (PubMed:20023638). Has activity toward H4K20Me1 only when nucleosome is used as a substrate and when not histone octamer is used as substrate (PubMed:20622853).

Storage

Shipped at conditions	Blue Ice
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

Supplementary info

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

Activity summary	JHDM1D also known as KDM7A is a histone demethylase enzyme involved in the removal of methyl groups from di- and trimethylated lysine residues on histone tails particularly at H3K9 and H3K27. This action impacts gene expression by altering chromatin structure making it an important player in regulating transcriptional activities. The target has a molecular mass of approximately 129 kDa. JHDM1D is widely expressed in various tissues with notably high expression levels in the brain and testis indicating its importance in these organs.
Biological function summary	JHDM1D functions as part of a larger protein complex that regulates chromatin remodeling and gene expression. It plays a significant role in epigenetic modification processes influencing cell differentiation and development through its demethylation activity. Such capabilities affect cellular proliferation and lineage specification and may impact immune responses and neurological functions.
Pathways	Epigenetic regulation and chromatin remodeling see direct involvement from JHDM1D through pathways including the histone modification pathway and Wnt signaling pathway. In these pathways JHDM1D interacts with related proteins like EZH2 which also takes part in chromatin modifications and transcriptional control. This interplay highlights the importance of JHDM1D in fine-tuning gene expression.

Associated diseases and disorders	Altered JHDM1D function relates to cancer progression and multiple neurological disorders. Dysregulation of this protein may contribute to abnormal cell growth and development as seen in certain cancers. Additionally its interactions with proteins like p53 suggest a potential role in tumor suppression pathways. In neurological disorders JHDM1D's impact on brain-specific gene expression may underline deficits seen in conditions like autism spectrum disorders.

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

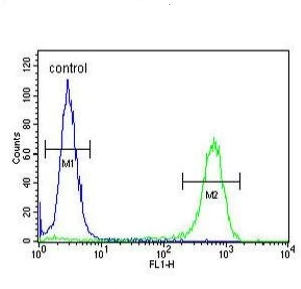
We do not recommend this combination. It is not covered by our product promise.

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.

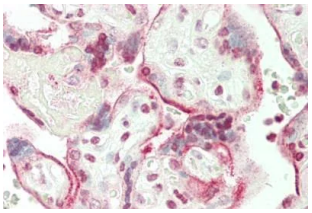
4 product images



Flow Cytometry (Intracellular) - Anti-JHDM1D antibody (ab230894)

JHDM1D Flow Cytometry (Intracellular) staining using rabbit Anti-JHDM1D antibody

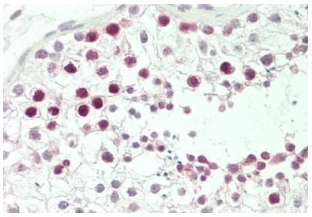
Intracellular flow cytometric analysis of HEK-293 (human epithelial cell line from embryonic kidney) cells labeling JHDM1D with ab230894 at 1/10 dilution (green) compared with anegative control cell (blue).FITC-conjugated goat-anti-rabbit secondary antibodies were used.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-JHDM1D antibody (ab230894)

JHDM1D Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-JHDM1D antibody

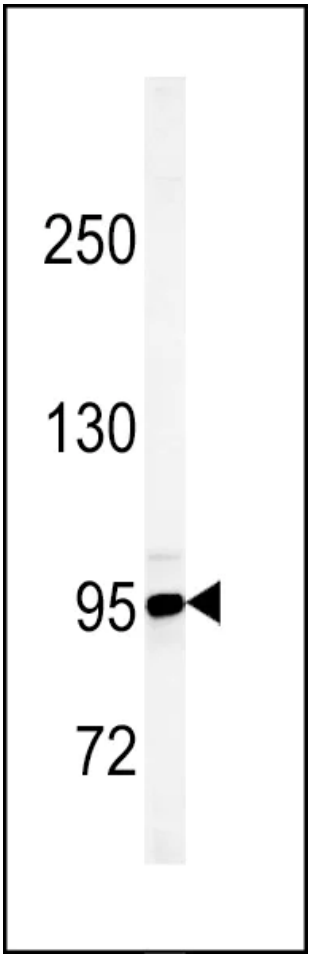
Formalin-fixed, paraffin-embedded human placenta tissue stained for JHDM1D using ab230894 at 1/50 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-JHDM1D antibody (ab230894)

JHDM1D Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-JHDM1D antibody

Formalin-fixed, paraffin-embedded human testis tissue stained for JHDM1D using ab230894 at 1/50 dilution in immunohistochemical analysis.



Western blot - Anti-JHDM1D antibody (ab230894)

All lanes:
Western blot - Anti-JHDM1D antibody (ab230894) at 1/1000 dilution

All lanes:
HEK-293 (human epithelial cell line from embryonic kidney) cell lysate at 35 µg

Predicted band size: 107 kDa

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