abcam

ab230544

Anti-HOPX/HOD 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 HOPX aa 1-100 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link Q9BPY8
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

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information HOPX

Function Atypical homeodomain protein which does not bind DNA and is required to modulate cardiac growth and development. Acts via its interaction with SRF, thereby modulating the expression of SRF-dependent cardiac-specific genes and cardiac development. Prevents SRF-dependent transcription either by inhibiting SRF binding to DNA or by recruiting histone deacetylase (HDAC) proteins that prevent transcription by SRF. Overexpression causes cardiac hypertrophy (By similarity). May act as a tumor suppressor. Acts as a co-chaperone for HSPA1A and HSPA1B chaperone proteins and assists in chaperone-mediated protein refolding (PubMed:27708256).

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	The protein HOPX also known as Homeodomain only protein is encoded by the HOPX gene. It is a small protein with a mass of approximately 8.5 kDa. HOPX is expressed in various tissues including cardiac myocytes epithelial tissues and stem cells. Known for its homeodomain-like structure HOPX does not bind DNA directly. Instead it influences transcription by interacting with other transcription factors and cofactors. The alternate name for HOPX is HOD and it serves as a reliable marker reflecting cellular differentiation and development.
Biological function summary	HOPX plays a role in regulating cell differentiation and tissue homeostasis. It acts without forming part of a larger protein complex primarily serving as a transcriptional regulator. This protein modulates the expression of genes critical for cell differentiation particularly in muscle and cardiac tissues. HOPX negatively regulates cell proliferation by modifying the transcription machinery influencing how cells enter mature states. Its role in differentiation makes it significant in both embryonic development and maintaining the integrity of adult cells.
Pathways	HOPX is significantly involved in the Wnt signaling pathway an important pathway in regulating cell fate across developmental stages. It modulates this pathway by interacting with proteins like β-catenin ensuring proper differentiation of various cell types. Another relevant pathway that includes HOPX is the BMP signaling pathway. Through this pathway HOPX contributes to osteogenesis and chondrogenesis working alongside proteins like SMADs which are effectors in the BMP pathway.
Associated diseases and disorders	HOPX has implications in cancer and heart disease. Aberrant HOPX expression can lead to cancer progression particularly in lung and colon cancers. It seems to act as a tumor suppressor and its interactions with proteins like p53 highlight its role in cancer biology. Additionally HOPX's regulation in cardiac development links it to congenital heart defects when mutations or misregulation occur. Understanding HOPX's interactions in these contexts offers potential therapeutic insights.

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

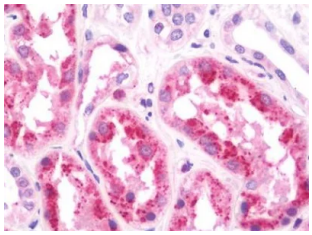
We do not recommend this combination. It is not covered by our product promise.

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.

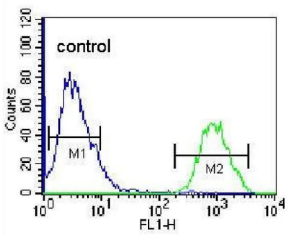
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HOPX/HOD antibody (ab230544)

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

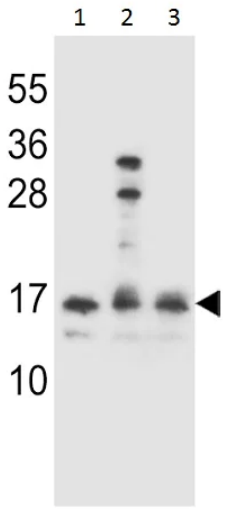
Formalin-fixed, paraffin-embedded human kidney tissue stained for HOPX/HOD with ab230544 at 1/100 dilution in immunohistochemical analysis.



Flow Cytometry (Intracellular) - Anti-HOPX/HOD antibody (ab230544)

HOPX/HOD Flow Cytometry (Intracellular) staining using rabbit Anti-HOPX/HOD antibody

Intracellular Flow Cytometry analysis of HEK-293 (Human epithelial cell line from embryonic kidney) cells, labeling HOPX/HOD with ab230544 at a 1/10 dilution (green) compared to a negative control (blue).
FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Western blot - Anti-HOPX/HOD antibody (ab230544)

All lanes:
Western blot - Anti-HOPX/HOD antibody (ab230544) at 1/1000 dilution

Lane 1:
Ramos (human Burkitt's lymphoma cell line) cell lysate at 35 µg

Lane 2:
A2058 cell lysate at 35 µg

Lane 3:
HEK-293 (human epithelial cell line from embryonic kidney) cell lysate at 35 µg

Developed using the ECL technique.

Predicted band size: 8 kDa

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