abcam

ab279390

Anti-HAND1 antibody [OTI1G10]

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	pH: 7.3 Preservative: 0.02% Sodium azide Constituents: 50% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human HAND1. Database link O96004
Clone number	OTI1G10
Purification technique	Affinity purification Protein A/G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS.

Reactivity data

WB

Tested

Species	Recombinant full length protein - Human
Dilution info	1/500
Notes	-

Species	Human
Dilution info	1/500
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Target data

See full target information HAND1

Function	Transcription factor that plays an essential role in both trophoblast giant cell differentiation and in cardiac morphogenesis (By similarity). Binds the DNA sequence 5'-NRTCTG-3' (non-canonical E-box) (By similarity). Acts as a transcriptional repressor of SOX15 (By similarity). In the adult, could be required for ongoing expression of cardiac-specific genes (PubMed:9931445).

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	HAND1 also known as eHAND or Thing1 is a transcription factor with a mass of approximately 23 kDa. It belongs to the basic helix-loop-helix (bHLH) family of transcription factors and acts by binding to DNA sequences to regulate gene expression. HAND1 plays a role in dimer formation usually forming heterodimers with other bHLH proteins. This target expresses predominantly in the heart and in extraembryonic tissues such as the placenta and trophoblast. During various stages of development HAND1 shows different expression patterns depending on the tissue type.
Biological function summary	The function of HAND1 involves critical roles in differentiation and development especially in cardiac development and placental formation. HAND1 is part of a transcriptional complex that guides embryonic cells into specific lineages. It influences cardiomyocyte proliferation and contributes to the structural formation of the developing heart. In placental tissues HAND1 controls trophoblast differentiation which is essential for proper placenta development and function.
Pathways	HAND1 interacts with several biological pathways notably the Wnt signaling pathway and TGF-beta signaling pathway. These pathways control cell proliferation differentiation and migration which are important for development. HAND1 forms functional relationships with other proteins such as HAND2 during these processes ensuring proper transcriptional regulation needed for developmental decisions. Wnt signaling can modulate HAND1 activity indirectly by influencing the expression of dimer partners.
Associated diseases and disorders	HAND1 relates to congenital heart defects and pre-eclampsia. Variations in HAND1 expression or mutations can disrupt normal cardiac morphogenesis leading to structural heart issues present at birth. In placental disorders like pre-eclampsia altered HAND1 expression can affect trophoblast differentiation and placental function. The interaction with other proteins such as GATA4 highlights its role in pathogenesis. Understanding HAND1's function and regulatory mechanisms provides insights into the development of these conditions.

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.

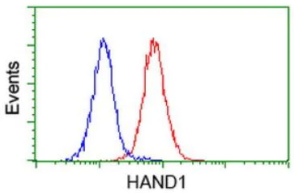
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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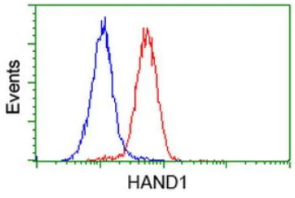
4 product images



Flow Cytometry (Intracellular) - Anti-HAND1 antibody [OTI1G10] (ab279390)

HAND1 Flow Cytometry (Intracellular) staining using mouse Anti-HAND1 antibody

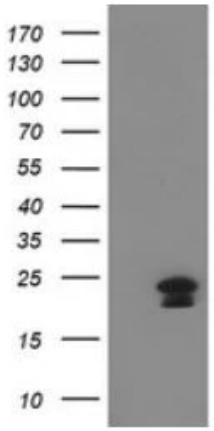
Flow cytometric Analysis of Jurkat (human T cell leukemia cell line from peripheral blood) cells using ab279390 at a 1/100 dilution (Red), compared to a non-specific negative control antibody (Blue).



Flow Cytometry (Intracellular) - Anti-HAND1 antibody [OTI1G10] (ab279390)

HAND1 Flow Cytometry (Intracellular) staining using mouse Anti-HAND1 antibody

Flow cytometric Analysis of HeLa (human epithelial cell line from cervix adenocarcinoma) cells using ab279390 at a 1/100 dilution (Red), compared to a non-specific negative control antibody (Blue).



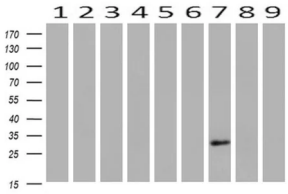
Western blot - Anti-HAND1 antibody [OTI1G10] (ab279390)

All lanes:
Western blot - Anti-HAND1 antibody [OTI1G10] (ab279390) at 1/500 dilution

Lane 1:
HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) cells transfected with the pCMV6-ENTRY control at 5 µg

Lane 2:
HEK-293T transfected cells pCMV6-ENTRY HAND1 cDNA for 48 hrs and lysed at 5 µg

Predicted band size: 24 kDa



Western blot - Anti-HAND1 antibody [OTI1G10] (ab279390)

All lanes:
Western blot - Anti-HAND1 antibody [OTI1G10] (ab279390) at 1/200 dilution

Lane 1:
Testis tissue extracts at 10 µg

Lane 2:
Omentum tissue extracts at 10 µg

Lane 3:
Uterus tissue extract at 10 µg

Lane 4:
Breast tissue extract at 10 µg

Lane 5:
Brain tissue extract at 10 µg

Lane 6:
Liver tissue extract at 10 µg

Lane 7:
Ovary tissue extract at 10 µg

Lane 8:
Thyroid gland tissue extract at 10 µg

Lane 9:
Colon tissue extract at 10 µg

Predicted band size: 24 kDa

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