abcam

ab175372

Anti-EKLF / KLF1 antibody [1B6A3]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human KLF1 aa 200 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link Q13351
Clone number	1B6A3
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from tissue culture supernatant.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/200 - 1/400

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/200 - 1/1000
Notes	-

Target data

See full target information KLF1

Function	Transcription regulator of erythrocyte development that probably serves as a general switch factor during erythropoiesis. Is a dual regulator of fetal-to-adult globin switching. Binds to the CACCC box in the beta-globin gene promoter and acts as a preferential activator of this gene. Furthermore, it binds to the BCL11A promoter and activates expression of BCL11A, which in turn represses the HBG1 and HBG2 genes. This dual activity ensures that, in most adults, fetal hemoglobin levels are low. Able to activate CD44 and AQP1 promoters (PubMed:21055716). When sumoylated, acts as a transcriptional repressor by promoting interaction with CDH2/MI2beta and also represses megakaryocytic differentiation.

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

Notes

This product was changed from ascites to supernatant. Lot no's high than GR252532-8 are from Tissue Culture Supernatant

Supplementary info

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

Activity summary	EKLF also known as KLF1 is a transcription factor critical for erythropoiesis. It weighs approximately 42 kDa and is predominantly expressed in erythroid cells within the bone marrow. EKLF binds specifically to CACCC elements in the DNA which are sequences commonly found in the promoters of genes essential for red blood cell differentiation. Its ability to regulate gene expression in these cells is instrumental in fetal and adult hemoglobin production. EKLF's distinctive role places it at the heart of erythroid lineage specification and maturation.
Biological function summary	The functions of EKLF extend beyond simple transcriptional regulation. This protein facilitates the switch from fetal to adult hemoglobin by promoting the expression of adult globin chains. EKLF does not work alone; it interacts with co-factors and enhancers to form transcriptional complexes that regulate a diverse array of target genes. These complexes are necessary for the execution of gene networks that include the alpha- and beta-globin gene clusters. Such regulation by EKLF is pivotal for maintaining erythroid cells' identity and function.
Pathways	EKLF integrates itself within the erythropoiesis and heme biosynthesis pathways. EKLF activates genes that participate in the erythropoietin signaling and heme production both of which are essential for effective erythrocyte maturation and function. EKLF also coordinates with other important transcription factors such as GATA1 and FOG-1. These interactions elucidate how EKLF aligns with broader gene expression networks emphasizing its essential role in processes leading to efficient red blood cell production.
Associated diseases and disorders	EKLF has a significant link to β-thalassemia and other hemoglobinopathies. Mutations or dysregulation within EKLF can disrupt normal hemoglobin synthesis leading to these disorders. Notably EKLF's regulation of hemoglobin gene expression connects it to diseases in tissues outside of the erythroid system. Furthermore EKLF interacts with proteins such as BCL11A in the context of β-thalassemia. This relationship highlights potential therapeutic strategies that target these pathways to treat hemoglobin disorders effectively.

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.

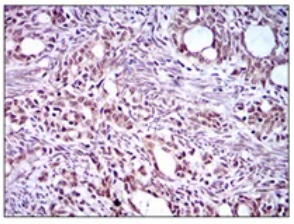
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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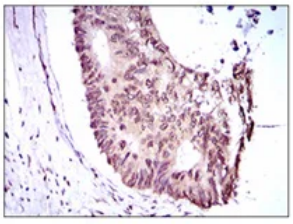
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EKLF / KLF1 antibody [1B6A3] (ab175372)

EKLF / KLF1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-EKLF / KLF1 antibody

Immunohistochemical analysis of paraffin-embedded Human cervical cancer tissue labeling EKLF / KLF1 using ab175372 at 1/200 dilution, followed by DAB staining.

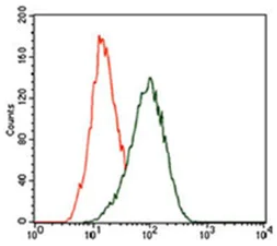


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EKLF / KLF1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-EKLF / KLF1 antibody

Immunohistochemical analysis of paraffin-embedded Human rectum cancer tissue labeling EKLF / KLF1 using ab175372 at 1/200 dilution, followed by DAB staining.

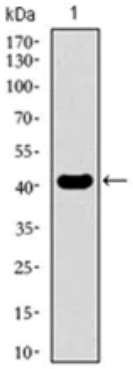
Flow Cytometry - Anti-EKLF / KLF1 antibody [1B6A3] (ab175372)



EKLF / KLF1 Flow Cytometry staining using mouse Anti-EKLF / KLF1 antibody

Flow cytometric analysis of HeLa cells labeling EKLF / KLF1 using ab175372 at 1/200 dilution (green) and negative control (red).

Western blot - Anti-EKLF / KLF1 antibody [1B6A3] (ab175372)



Expected MW is 42.6 kDa
All lanes:
Western blot - Anti-EKLF / KLF1 antibody [1B6A3] (ab175372) at 1/500 dilution

All lanes:
Human EKLF / KLF1 recombinant protein

Predicted band size: 38 kDa

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