abcam

ab175424

Anti-EDR1 / PHC1 antibody [1F3F3]

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human PHC1 aa 750 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link P78364
Clone number	1F3F3
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	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

WB

Tested

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

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information PHC1

Function	Component of a Polycomb group (PcG) multiprotein PRC1-like complex, a complex class required to maintain the transcriptionally repressive state of many genes, including Hox genes, throughout development. PcG PRC1 complex acts via chromatin remodeling and modification of histones; it mediates monoubiquitination of histone H2A 'Lys-119', rendering chromatin heritably changed in its expressibility. Required for proper control of cellular levels of GMNN expression.

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	EDR1 also known as PHC1 is a protein that functions mechanically by participating in chromatin modification. Its molecular mass is approximately 105 kDa. The protein is expressed in various tissues with significant presence noted in proliferative cells. PHC1 is commonly referred to as a member of the Polycomb group proteins which are essential in regulating gene expression by modifying chromatin structure influencing the accessibility of DNA for transcription. It plays a critical role in the maintenance of repression states of homeotic genes during development.
Biological function summary	EDR1/PHC1 is involved in maintaining cellular identity and proliferation by forming part of the Polycomb repressive complex 1 (PRC1). This complex facilitates the ubiquitination of histone H2A leading to transcriptional repression. PHC1 influences the silencing of specific target genes that are important in developmental pathways. It also plays a role in the regulation of stem cell pluripotency and differentiation contributing to the epigenetic memory of cells that persist through cell divisions.

Pathways	PHC1 significantly influences gene silencing through its involvement in the Polycomb repressive complex 1 pathway interacting with other Polycomb-related proteins like RING1 and BMI1. The protein is key in the regulation of the Wnt signaling pathway impacting the balance between cell differentiation and proliferation. PHC1 affects this pathway by modulating the expression of genes that are important for cell fate determination. Its interaction with BMI1 and other Polycomb group proteins ensures the proper progression of these pathways.
Associated diseases and disorders	Defects in PHC1 contribute to leukaemias and neural developmental disorders. Mutations within the PHC1 gene have been associated with disrupted gene silencing and aberrant expression profiles contributing to the etiology of these conditions. In leukaemias its interaction with BMI1 is important as the dysregulation of this complex can lead to uncontrolled cell proliferation. In neural developmental disorders PHC1 affects the expression of key regulatory genes further highlighting its importance in normal cellular function.

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

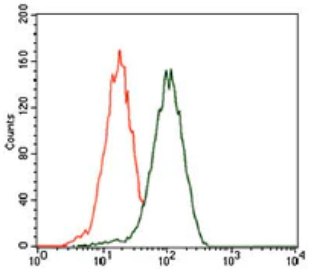
We do not recommend this combination. It is not covered by our product promise.

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.

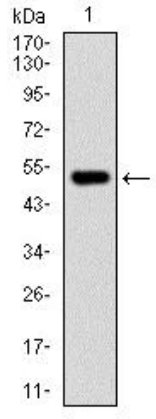
3 product images



Flow Cytometry - Anti-EDR1 / PHC1 antibody [1F3F3] (ab175424)

EDR1 / PHC1 Flow Cytometry staining using mouse Anti-EDR1 / PHC1 antibody

Flow cytometric analysis of HEK293 cells labeling EDR1 / PHC1 with ab175424 at 1/200 dilution (green) and negative control (red).



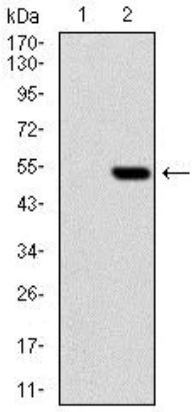
Western blot - Anti-EDR1 / PHC1 antibody [1F3F3] (ab175424)

EDR1 / PHC1 Western blot staining of EDR1/PHC1 recombinant protein (amino acids 758-1004) using mouse Anti-EDR1 / PHC1 antibody

All lanes:
Western blot - Anti-EDR1 / PHC1 antibody [1F3F3] (ab175424) at 1/500 dilution

All lanes:
EDR1/PHC1 recombinant protein (amino acids 758-1004)

Predicted band size: 106 kDa



Western blot - Anti-EDR1 / PHC1 antibody [1F3F3] (ab175424)

All lanes:
Western blot - Anti-EDR1 / PHC1 antibody [1F3F3] (ab175424) at 1/500 dilution

Lane 1:
HEK293 cell lysate

Lane 2:
EDR1/PHC1 (amino acids 758-1004)-hIgGFc transfected HEK293 cell lysate

Predicted band size: 106 kDa

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