abcam

ab154799

Anti-LEPRE1/P3H1 antibody [EPR10193(B)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR10193(B)
Purification technique	Affinity purification Protein A
Concentration	0.094 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse, Synthetic peptide - Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Not recommended

Species	Mouse, Synthetic peptide - Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Synthetic peptide - Human
Dilution info	-
Notes	-

I-ELISA

Tested

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Not recommended

Species	Mouse, Synthetic peptide - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Not recommended

Species	Mouse, Synthetic peptide - Human
Dilution info	-
Notes	-

Target data

See full target information P3H1

Function	Basement membrane-associated chondroitin sulfate proteoglycan (CSPG). Has prolyl 3-hydroxylase activity catalyzing the post-translational formation of 3-hydroxyproline in -Xaa-Pro-Gly- sequences in collagens, especially types IV and V. May be involved in the secretory pathway of cells. Has growth suppressive activity in fibroblasts.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	LEPRE1 also known as P3H1 or prolyl 3-hydroxylase 1 is an enzyme involved in collagen synthesis with a molecular mass of approximately 71 kDa. It is a member of the prolyl hydroxylase family and carries out 3-hydroxylation of proline residues in collagen. The enzyme localizes largely to the endoplasmic reticulum where it contributes to the post-translational modification of collagen. LEPRE1 is ubiquitously expressed with higher concentrations observed in tissues rich in collagen such as skin bone and cartilage.

Biological function summary	LEPRE1 plays a fundamental role in the maturation of collagen which is an important structural protein in connective tissues. This enzyme functions as a part of the collagen prolyl 3-hydroxylation complex which includes cartilage-associated protein (CRTAP) and cyclophilin B (PPIB). The complex is responsible for the correct folding and stability of collagen molecules ensuring the proper formation of the extracellular matrix. This structural role is essential for maintaining tissue integrity and function.
Pathways	LEPRE1 is important in the collagen biosynthesis and modifying pathways. It interacts with other biosynthesis enzymes like lysyl oxidase and procollagen-proline dioxygenase. These proteins coordinate to execute post-translational modifications which stabilize the collagen triple helix structure. Pirh2 and Hsp47 act along with LEPRE1 in similar pathways helping in folding and secretion of collagen.
Associated diseases and disorders	LEPRE1 mutations have been linked to connective tissue disorders most notably osteogenesis imperfecta a genetic disorder causing brittle bones. Such mutations impair collagen modification leading to defective collagen formation and bone fragility. Additionally dysregulation of LEPRE1 activity appears connected to disorder Ehlers-Danlos syndrome noted for joint hypermobility and skin elasticity issues. COL1A1 and COL1A2 two primary components of type I collagen often associate with LEPRE1 in disease contexts as mutations in these collagens lead to similar clinical manifestations.

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

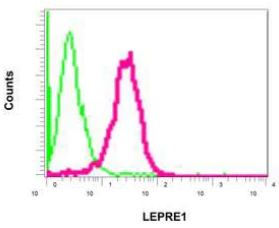
We do not recommend this combination. It is not covered by our product promise.

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.

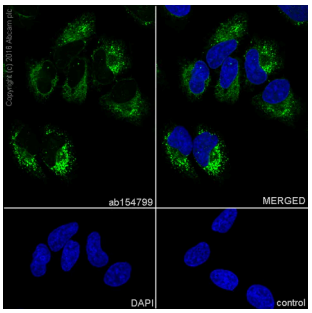
5 product images



Flow Cytometry (Intracellular) - Anti-LEPRE1/P3H1 antibody [EPR10193(B)] (ab154799)

LEPRE1/P3H1 Flow Cytometry (Intracellular) staining using rabbit Anti-LEPRE1/P3H1 antibody

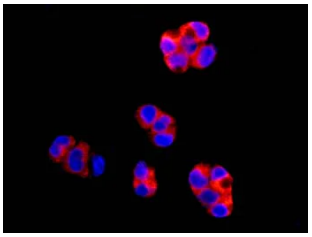
Intracellular flow cytometric analysis of permeabilized A549 cells labeling LEPRE1/P3H1 with ab154799 at 1/10 dilution (red) or a negative rabbit IgG (green).



Immunocytochemistry/ Immunofluorescence - Anti-LEPRE1/P3H1 antibody [EPR10193(B)] (ab154799)

LEPRE1/P3H1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-LEPRE1/P3H1 antibody

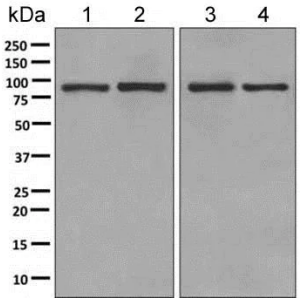
Immunocytochemistry/Immunofluorescence analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) labeling LEPRE1/P3H1 with Purified ab154799 at 1/500 dilution (5µg/ml). Cells were fixed with 100% methanol. ab150077 Goat anti rabbit IgG(Alexa Fluor® 488) at 1/1000 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI. PBS was used instead of the primary antibody as the negative control.



Immunocytochemistry/ Immunofluorescence - Anti-LEPRE1/P3H1 antibody [EPR10193(B)] (ab154799)

LEPRE1/P3H1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-LEPRE1/P3H1 antibody

Immunofluorescence analysis of HepG2 cells labeling LEPRE1/P3H1 with ab154799 at 1/250 dilution.



Western blot - Anti-LEPRE1/P3H1 antibody [EPR10193(B)] (ab154799)

LEPRE1/P3H1 Western blot staining using rabbit Anti-LEPRE1/P3H1 antibody

All lanes:
Western blot - Anti-LEPRE1/P3H1 antibody [EPR10193(B)] (ab154799) at 1/1000 dilution

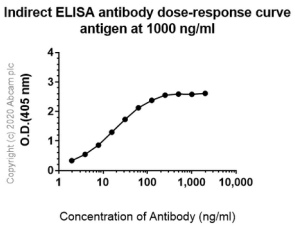
Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
A549 cell lysate at 10 µg

Lane 4:
Human placenta tissue lysate at 10 µg

Predicted band size: 83 kDa



Indirect ELISA - Anti-LEPRE1/P3H1 antibody [EPR10193(B)] (ab154799)

ELISA using ab154799 at varying antibody concentrations and antigen concentration at 1000 ng/mL. An Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) (1/2500) was used as the secondary antibody.

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