abcam

ab249107

Anti-LEPRE1/P3H1 antibody [EPR10193(B)] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR10193(B)
Purification technique	Affinity purification
Concentration	1.015 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

Not recommended

Species	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	-

IP

Not recommended

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

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

IHC-P

Not recommended

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab249107 is the carrier-free version of ab154799.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

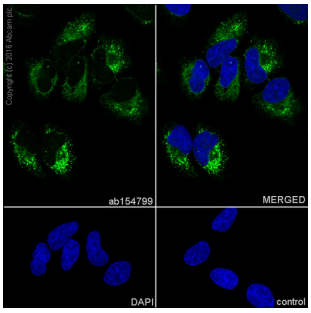
We do not recommend this combination. It is not covered by our product promise.

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.

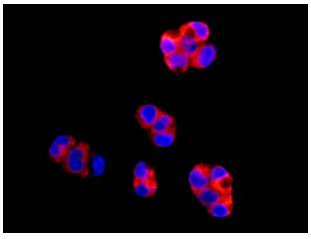
3 product images



Immunocytochemistry/ Immunofluorescence - Anti-LEPRE1/P3H1 antibody [EPR10193(B)] - BSA and Azide free (ab249107)

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

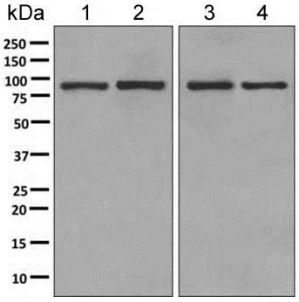
This data was developed using ab154799, the same antibody clone in a different buffer formulation.
Immunocytochemistry/Immunofluorescence analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) labeling LEPRE1/P3H1 with Purified ab154799 at 1/500 dilution (5µg/ml). Cells were fixed with 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)] - BSA and Azide free (ab249107)

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

This data was developed using ab154799, the same antibody clone in a different buffer formulation.
Immunofluorescence analysis of HepG2 cells labeling LEPRE1/P3H1 with ab154799 at 1/250 dilution.



Western blot - Anti-LEPRE1/P3H1 antibody [EPR10193(B)] - BSA and Azide free (ab249107)

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

This data was developed using ab154799, the same antibody clone in a different buffer formulation.
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

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