

Product datasheet

Anti-MMP13 antibody [EPR21778] ab219620

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [24 References](#) [5 Images](#)

Overview

Product name	Anti-MMP13 antibody [EPR21778]
Description	Rabbit monoclonal [EPR21778] to MMP13
Host species	Rabbit
Specificity	ab219620 showed specific staining in cortical bone, but that no staining was observed in the breast cancer tissue tested.
Tested applications	Suitable for: IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human tibia tissue; Mouse and rat femur tissues. Recommend to test on the cortical bone as a positive control (PMID: 22549931). Mmp13 is expressed in mature osteoblasts (PMID: 17987127), other tissue are proved to be negative under normal condition (PMID: 17179173).
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	<p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: PBS, 40% Glycerol, 0.05% BSA</p>
Purity	Protein A purified
Clonality	Monoclonal

Clone number EPR21778

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab219620 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. For human. Use at 1/500 dilution for mouse and rat. Recommend to incubate the primary antibody at 4C overnight and use the HRP-polymer secondary antibody to detect.

Target

Function Degrades collagen type I. Does not act on gelatin or casein. Could have a role in tumoral process.

Tissue specificity Seems to be specific to breast carcinomas.

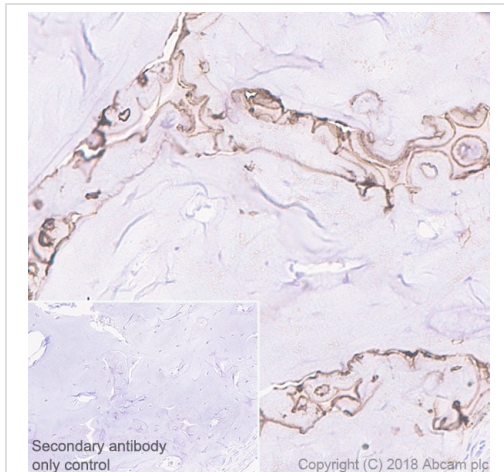
Involvement in disease Defects in MMP13 are the cause of spondyloepimetaphyseal dysplasia Missouri type (SEMD-MO) [MIM:602111]. A bone disease characterized by moderate to severe metaphyseal changes, mild epiphyseal involvement, rhizomelic shortening of the lower limbs with bowing of the femora and/or tibiae, coxa vara, genu varum and pear-shaped vertebrae in childhood. Epimetaphyseal changes improve with age.
Defects in MMP13 are the cause of metaphyseal anadysplasia type 1 (MANDP1) [MIM:602111]. Metaphyseal anadysplasia consists of an abnormal bone development characterized by severe skeletal changes that, in contrast with the progressive course of most other skeletal dysplasias, resolve spontaneously with age. Clinical characteristics are evident from the first months of life and include slight shortness of stature and a mild varus deformity of the legs. Patients attain a normal stature in adolescence and show improvement or complete resolution of varus deformity of the legs and rhizomelic micromelia.

Sequence similarities Belongs to the peptidase M10A family.
Contains 4 hemopexin-like domains.

Domain The conserved cysteine present in the cysteine-switch motif binds the catalytic zinc ion, thus inhibiting the enzyme. The dissociation of the cysteine from the zinc ion upon the activation-peptide release activates the enzyme.

Cellular localization Secreted > extracellular space > extracellular matrix.

Images

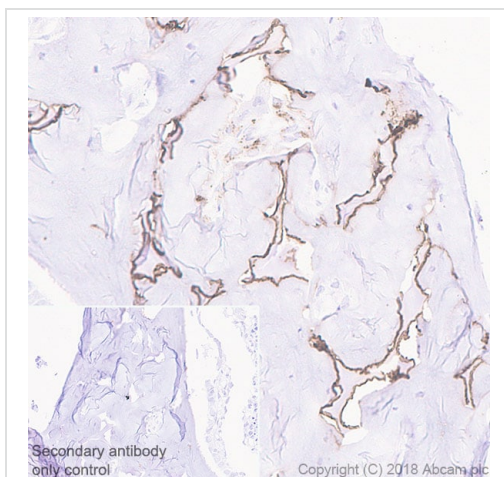


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MMP13 antibody [EPR21778] (ab219620)

Immunohistochemical analysis of paraffin-embedded rat femur tissue labeling MMP13 with ab219620 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining on cortical bone of rat femur (PMID: 22549931) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

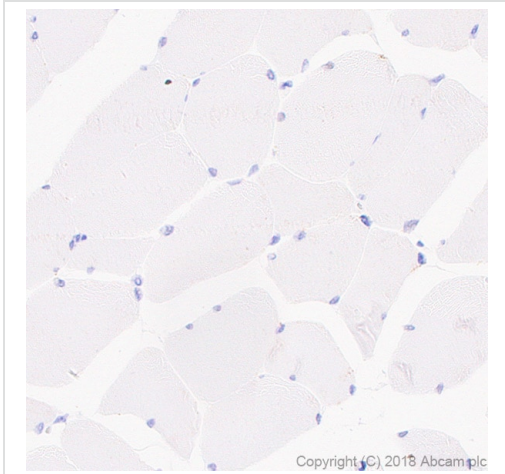


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MMP13 antibody [EPR21778] (ab219620)

Immunohistochemical analysis of paraffin-embedded mouse femur tissue labeling MMP13 with ab219620 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining on cortical bone of mouse femur (PMID: 22549931) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

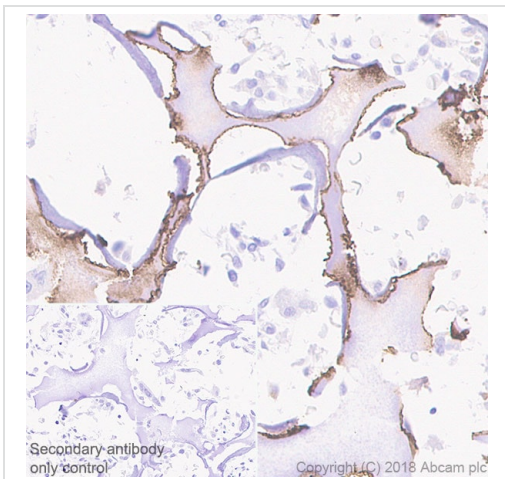


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MMP13 antibody [EPR21778] (ab219620)

Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue labeling MMP13 with ab219620 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Counter stained with hematoxylin.

Negative control: No staining on human skeletal muscle (PMID: 9056642) is observed.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MMP13 antibody [EPR21778] (ab219620)

Immunohistochemical analysis of paraffin-embedded human tibia tissue labeling MMP13 with ab219620 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining on cortical bone of human tibia (PMID: 22549931) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-MMP13 antibody [EPR21778] (ab219620)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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