

Anti-MMP13 antibody ab39012

★★★★☆ [18 Abreviews](#) [428 References](#) [2 Images](#)

Overview

Product name	Anti-MMP13 antibody
Description	Rabbit polyclonal to MMP13
Host species	Rabbit
Specificity	ab39012 recognizes the latent proenzyme, at 60 Kd, as well as the active form at 48 Kd, and intermediate activation forms. It does not cross react with the other MMP family members. ab39012 recognizes the Hinge region of MMP13.
Tested applications	Suitable for: IHC-P, WB, IHC-Fr, ICC/IF, Flow Cyt, Sandwich ELISA
Species reactivity	Reacts with: Mouse, Rat, Dog, Human
Immunogen	Synthetic peptide corresponding to Human MMP13 (Hinge). Database link: P45452 (Peptide available as ab238653 , ab44853)
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</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. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituent: 50% Glycerol
Purity	Immunogen affinity purified
Purification notes	The antibody has been peptide-affinity purified.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab39012 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	★★★★★ (11)	Use at an assay dependent concentration.
WB	★★★★★ (2)	1/3000 - 1/6000. Predicted molecular weight: 54 kDa. 1/3000, when using colorimetric substrates such as BCIP/NBT - 1/6000, when using chemiluminescent substrates. Dilution optimised using Chromogenic detection. When used against the reduced protein identifies a band at 60 Kd. Note: The low endogenous protein levels may require concentration of samples by ultrafiltration or ammonium sulfate precipitation prior to Western
IHC-Fr	★★★★★ (3)	Use at an assay dependent concentration.
ICC/IF	★★★★★ (1)	Use at an assay dependent concentration. PubMed: 24056368
Flow Cyt		Use at an assay dependent concentration. ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.
Sandwich ELISA		Use a concentration of 0.5 µg/ml. For sandwich ELISA, use this antibody as Detection at 0.5µg/ml with ab77949 as Capture.

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.

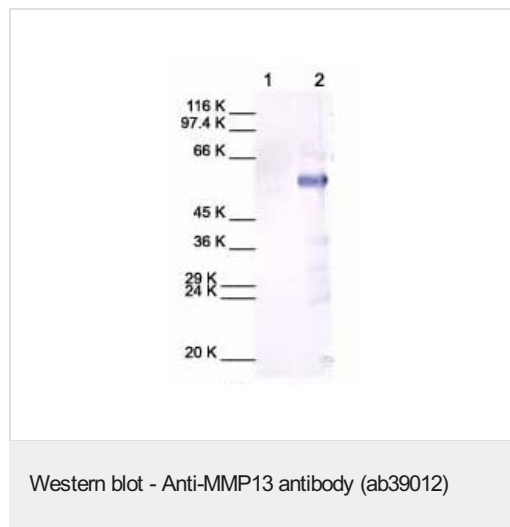
Sequence similarities

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.

Images



All lanes : Anti-MMP13 antibody (ab39012) at 1/3000 dilution

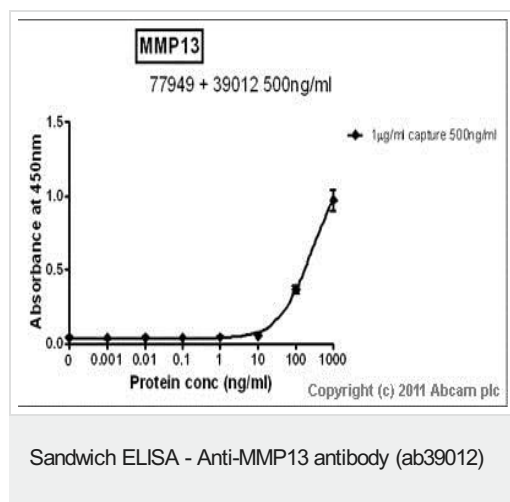
Lane 1 : cell media from human chondrosarcoma (untreated).

Lane 2 : cell media from human chondrosarcoma (IL1 beta treated).

Predicted band size: 54 kDa

Observed band size: 60 kDa

The loading amount is 15 μ l/lane, and the condrosarcoma media was concentrated 40x.



Standard curve for MMP13; dilution range 1pg/ml to 1 μ g/ml using Capture Antibody Mouse monoclonal [181-15A12] to MMP13 (**ab77949**) at 1 μ g/ml and Detector Antibody Rabbit polyclonal to MMP13 - Hinge region (ab39012) at 0.5 μ g/ml.

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

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