abcam

Product datasheet

Anti-MMP13 antibody [181-15A12] ab77949

1 Image

Overview

Product name	Anti-MMP13 antibody [181-15A12]
Description	Mouse monoclonal [181-15A12] to MMP13
Host species	Mouse
Specificity	Reacts with precursor and active forms of human MMP13 and does not cross react with human MMP1, 2, 3, 7, 8, 9.
Tested applications	**Suitable for:** Sandwich ELISA, ELISA, WB, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant human matrix metalloproteinase 13 (human MMP13)

Properties

Form	Liquid
Storage instructions	Store at -20°C. Stable for 12 months at -20°C
Storage buffer	Preservative: None Constituents: 4% Protease Free BSA, 0.1M PBS, pH 7.0
Purity	Protein G purified
Clonality	Monoclonal
Clone number	181-15A12
Isotype	IgG1
Light chain type	kappa

Applications

Our Abpromise guarantee covers the use of **ab77949** 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

Application	Abreviews	Notes
Sandwich ELISA		Use a concentration of 1 µg/ml. Can be paired for Sandwich ELISA with Rabbit polyclonal to MMP13 (ab39012). For sandwich ELISA, use this antibody as Capture at 1µg/ml with ab39012 as Detection.
ELISA		Use at an assay dependent concentration.
WB		Use a concentration of 1 µg/ml. Predicted molecular weight: 54 kDa.
IHC-P		Use at an assay dependent concentration.

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.

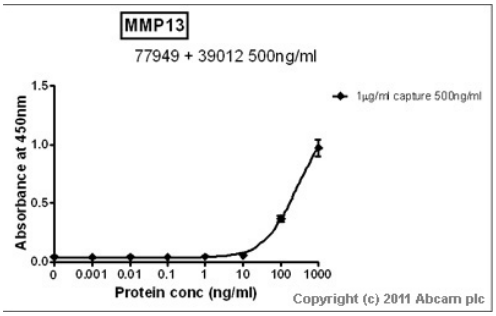
Domain

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



Sandwich ELISA - Anti-MMP13 antibody [181-15A12] (ab77949)

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

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