SunLong Biotech Co.,LTD
Tel: 0086-571- 56623320 Fax:0086-571- 56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-MMP2 antibody

SL4605R

Product Name:	MMP2
Chinese Name:	基质金属蛋白酶-2抗体
Alias:	PEX; MMP-2; MMP 2; 72 kDa gelatinase; 72kD type IV collagenase; CLG 4; CLG 4A; CLG4; CLG4A; Collagenase Type 4 alpha; Collagenase type IV A; Gelatinase A; Gelatinase alpha; Gelatinase neutrophil; Matrix metallopeptidase 2 gelatinase A 72kDa gelatinase 72kDa type IV collagenase; Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase); Matrix Metalloproteinase 2; Matrix metalloproteinase II; MMP 2; MMP II; MONA; Neutrophil gelatinase; TBE 1.
文献引用 PubMed :	**Specific References(1)**|SL4605R has been referenced in 1 publications. **[IF=5.83]**Fan, Gaochao, et al. "Ultrasensitive photoelectrochemical immunoassay for matrix metalloproteinase-2 detection based on CdS: Mn/CdTe co-sensitized TiO2 nanotubes and signal amplification of SiO2@ Ab2 conjugates." Analytical Chemistry (2014).**other;** PubMed:25420143
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=2ug/TestIF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	24/62kDa
Cellular localization:	The nucleuscytoplasmicThe cell membraneSecretory protein
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human MMP-2 PEX:561-660/660
Lsotype:	IgG

Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	This gene is a member of the matrix metalloproteinase (MMP) gene family, that are zinc-dependent enzymes capable of cleaving components of the extracellular matrix and molecules involved in signal transduction. The protein encoded by this gene is a gelatinase A, type IV collagenase, that contains three fibronectin type II repeats in its catalytic site that allow binding of denatured type IV and V collagen and elastin. Unlike most MMP family members, activation of this protein can occur on the cell membrane. This enzyme can be activated extracellularly by proteases, or, intracellulary by its S-glutathiolation with no requirement for proteolytical removal of the pro-domain. This protein is thought to be involved in multiple pathways including roles in the nervous system, endometrial menstrual breakdown, regulation of vascularization, and metastasis. Mutations in this gene have been associated with Winchester syndrome and Nodulosis-Arthropathy-Osteolysis (NAO) syndrome. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Oct 2014] **Function:** Ubiquitinous metalloproteinase that is involved in diverse functions such as remodeling of the vasculature, angiogenesis, tissue repair, tumor invasion, inflammation, and atherosclerotic plaque rupture. As well as degrading extracellular matrix proteins, can also act on several nonmatrix proteins such as big endothelial 1 and beta-type CGRP promoting vasoconstriction. Also cleaves KISS at a Gly-|-Leu bond. Appears to have a role in myocardial cell death pathways. Contributes to myocardial oxidative stress by regulating the activity of GSK3beta. Cleaves GSK3beta in vitro. Involved in the formation of the fibrovascular tissues in association with MMP14. PEX, the C-terminal non-catalytic fragment of MMP2, posseses anti-angiogenic and anti-tumor properties and inhibits cell migration and cell adhesion to FGF2 and vitronectin. Ligand for integrinv/beta3 on the surface of blood vessels. Isoform 2: Mediates the proteolysis of CHUK/IKKA and initiates a primary innate immune response by inducing mitochondrial-nuclear stress signaling with activation of the pro-inflammatory NF-kappaB, NFAT and IRF transcriptional pathways. **Subunit:** Interacts (via the C-terminal hemopexin-like domains-containing region) with the integrin alpha-V/beta-3; the interaction promotes vascular invasion in angiogenic vessels and melamoma cells. Interacts (via the C-terminal PEX domain) with TIMP2 (via the C-terminal); the interaction inhibits the degradation activity. Interacts with GSK3B. **Subcellular Location:** Isoform 1: Secreted, extracellular space, extracellular matrix. Membrane. Nucleus. Note=Colocalizes with integrin alphaV/beta3 at the membrane surface in angiogenic

blood vessels and melanomas. Found in mitochondria, along microfibrils, and in nuclei of cardiomyocytes.
Isoform 2: Cytoplasm. Mitochondrion.

Tissue Specificity:
Produced by normal skin fibroblasts. PEX is expressed in a number of tumors including gliomas, breast and prostate.

Post-translational modifications:
Phosphorylation on multiple sites modulates enzymatic activity. Phosphorylated by PKC in vitro.
The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-MMP3). Autocatalytic cleavage in the C-terminal produces the anti-angiogenic peptide, PEX. This processing appears to be facilitated by binding integrinv/beta3.

DISEASE:
Multicentric osteolysis, nodulosis, and arthropathy (MONA) [MIM:259600]: An autosomal recessive syndrome characterized by severe multicentric osteolysis with predominant involvement of the hands and feet. Additional features include coarse face, corneal opacities, patches of thickened, hyperpigmented skin, hypertrichosis and gum hypertrophy. {ECO:0000269|PubMed:11431697, disease is caused by mutations affecting the gene represented in this entry.

Similarity:
Belongs to the peptidase M10A family. {ECO:0000305}.
Contains 3 fibronectin type-II domains.
Contains 4 hemopexin repeats.

SWISS:
P08253

Gene ID:
4313

Database links:

Entrez Gene: 4313Human

Entrez Gene: 17390Mouse

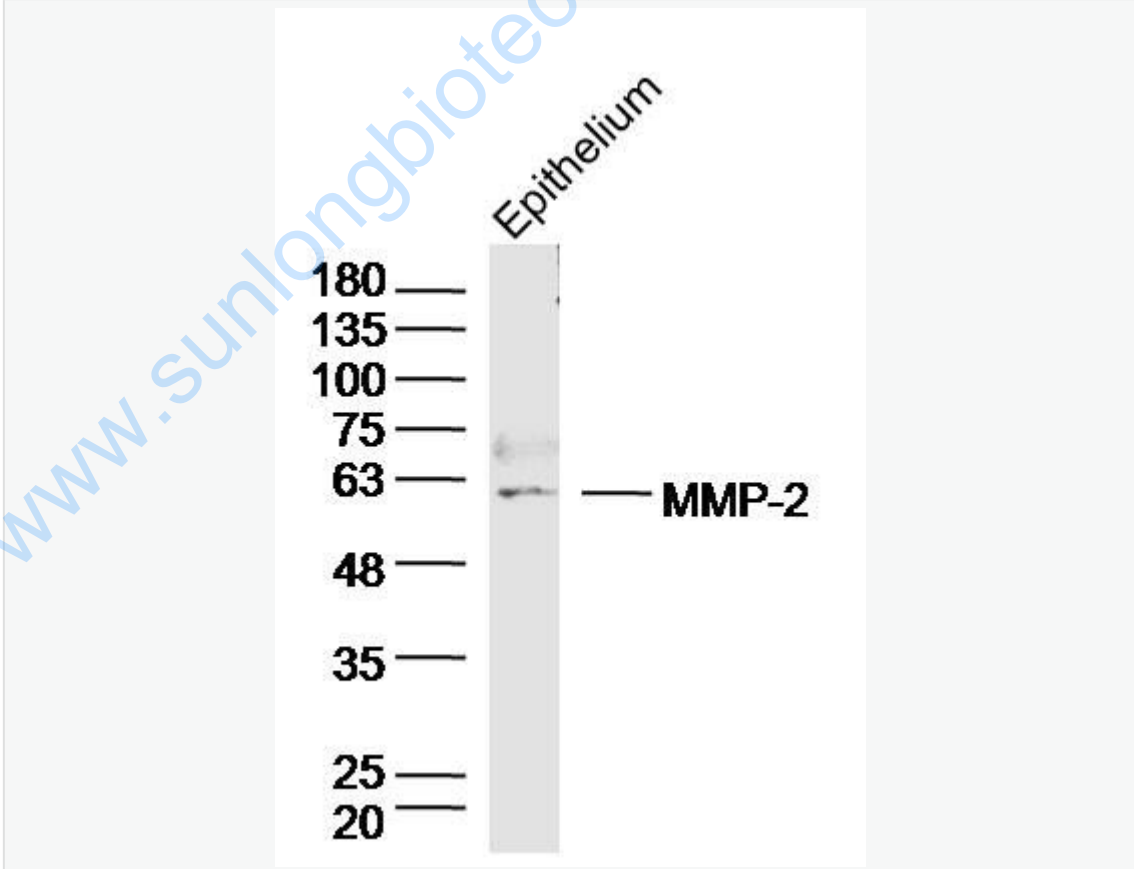
Entrez Gene: 81686Rat

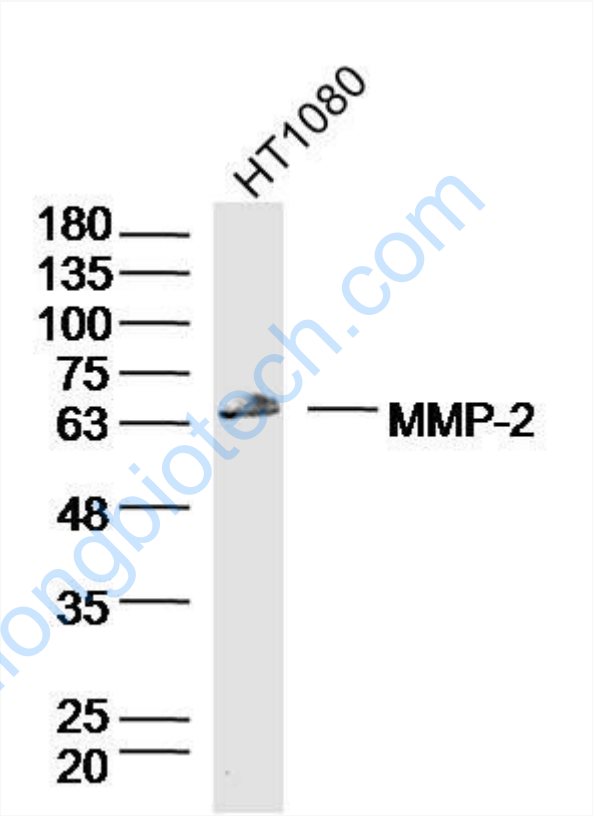
Omim: 120360Human

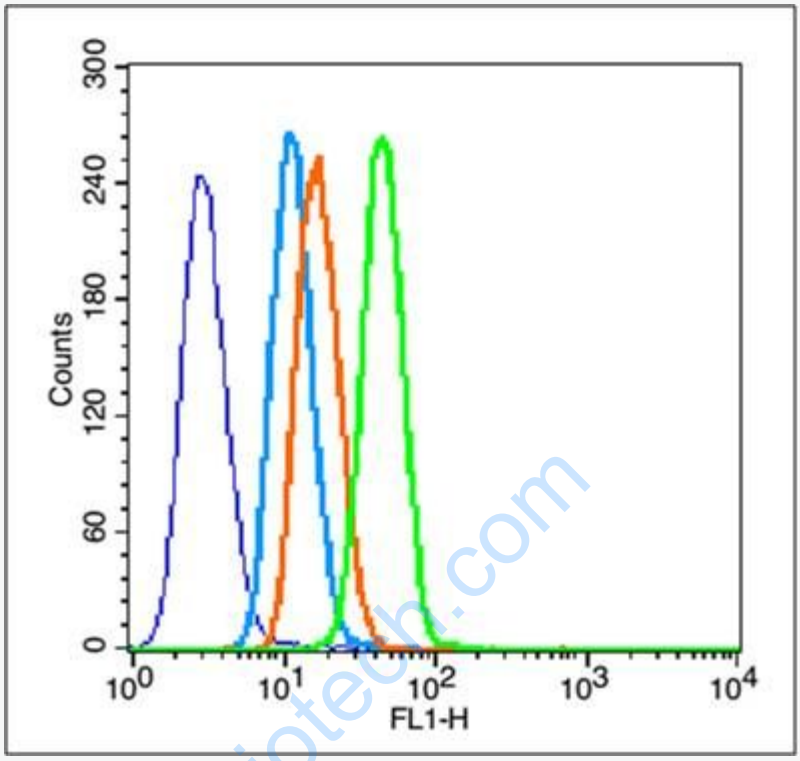
SwissProt: P08253Human

SwissProt: P33434Mouse

SwissProt: P33436Rat

	Unigene: 513617Human Unigene: 29564Mouse Unigene: 6422Rat **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. 基质金属蛋白酶(matrix metalloproteinases, MMPs)MMP2是一族依赖锌离子而降解各种Extracellular matrix的蛋白酶，亦称IV型胶原酶或称明胶酶A，其主要功能为降解IV型胶原，因而它在Tumour细胞突破基底膜屏障和浸润转移中起重要作用。目前主要用于各种恶性Tumour(如乳腺癌、胃肠道癌、卵巢癌、膀胱癌等)中的基底膜检测与转移浸润的研究。
Picture:	 Sample: Epithelium (Mouse) Lysate at 40 ug Primary: Anti-MMP2 (SL4605R) at 1/300 dilution

	Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 24/62 kD Observed band size: 62 kD
	 Sample: HT1080 Cell (Human) Lysate at 40 ug Primary: Anti-MMP2 (SL4605R) at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 24/62 kD Observed band size: 64 kD

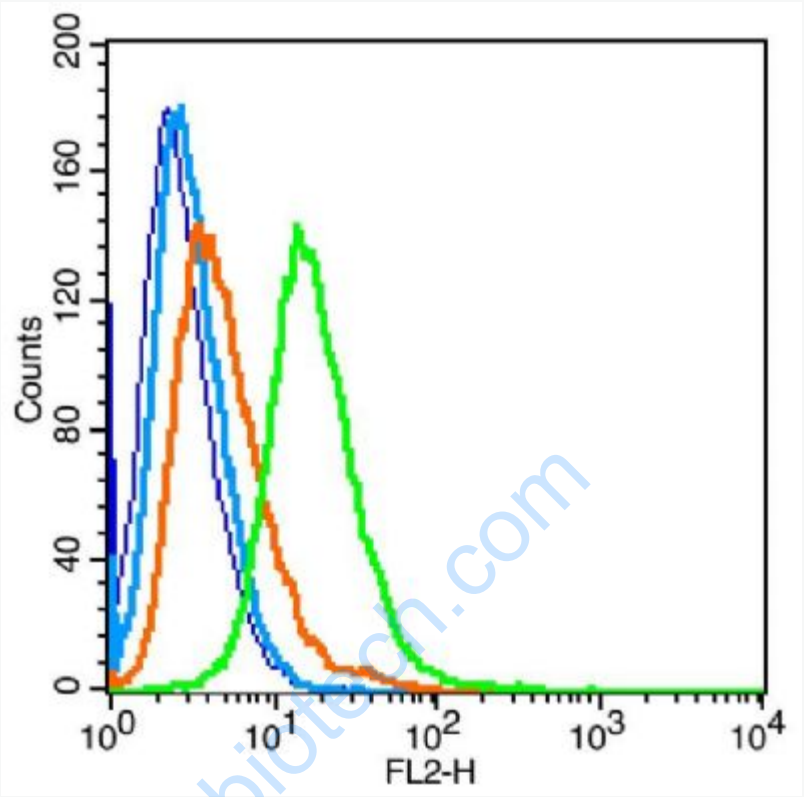


Blank control (blue line): Hela (fixed with 80% methanol (5 min at -20℃) and then permeabilized with 0.1% PBS-Tween for 20 min at room temperature).

Primary Antibody (green line): Rabbit Anti- MMP2 antibody (SL4605R),Dilution: 1µg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC, Dilution: 1µg /test.



Blank control:U-87MG (fixed with 2% paraformaldehyde (10 min), then permeabilized with 90% ice-cold methanol for 30 min on ice).

Primary Antibody: Rabbit Anti-MMP2 antibody(SL4605R), Dilution: 5μg in 100 μL 1X PBS containing 0.5% BSA;

Isotype Control Antibody: Rabbit IgG(orange),used under the same conditions);

Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.