

Product datasheet for **TA336901**

MMP9 Mouse Monoclonal Antibody [Clone ID: 4A3]

Product data:

Product Type:	Primary Antibodies
Clone Name:	4A3
Applications:	ELISA, IHC, WB
Recommended Dilution:	Western Blot: 1:500-1:1000, ELISA: 1:100 - 1:2000, Immunohistochemistry: 1:100-1:200, Immunohistochemistry-Paraffin: 1:100-1:200
Reactivity:	Human, Rat
Host:	Mouse
Isotype:	IgG1, kappa
Clonality:	Monoclonal
Immunogen:	Synthetic peptide from the N-terminus of human MMP9 [Swiss-Prot# P14780]
Formulation:	PBS containing 0.05% BSA, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Protein G purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	matrix metalloproteinase 9
Database Link:	NP_004985 Entrez Gene 81687 Rat Entrez Gene 4318 Human P14780

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Background:

MMP9, also known as Matrix metalloproteinase 9 or gelatinase B is a member of the matrix metalloproteinase (MMP) family. The MMPs are zinc-containing enzymes involved in the degradation of the extracellular matrix in normal physiological processes including embryonic development, reproduction and tissue remodeling. Most MMP family members are secreted as inactive proproteins that become activated when cleaved by extracellular proteinases. The proenzyme MMP9 is thought to be a 92 kDa protein. Processing of the precursor MMP9 yields different active forms, two of which were identified in Duncan et al 1998 (PMID: 9851689) to be 82 kDa and 63 kDa proteins. The 82 kDa protein results from cleavage at the Arg87-Phe88 bond. And the 63 kDa protein is caused by a further cleavage to the 82 kDa protein within the C-terminus domain between Arg527-Gly528. The main 63 kDa protein produced thus has the N-terminus of activated MMP9 and has a cleaved C-terminus. Antibodies specific to the active forms of MMP9 can be useful tools for studying important pathological processes such as tumor invasion, metastasis and arthritis.

Synonyms:

CLG4B; GELB; MANDP2; MMP-9

Note:

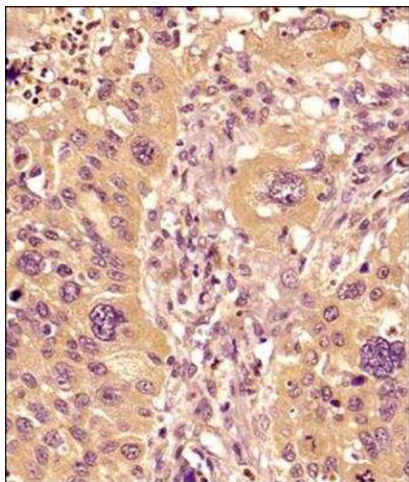
This MMP9 Antibody (4A3) is useful for Western Blot, ELISA and Immunohistochemistry on paraffin embedded sections. In Western Blot a band can be seen at 82 or 63 kDa, representing the active forms of MMP9. In IHC, cytoplasmic and extracellular staining was observed in HeLa cells. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended.

Protein Families:

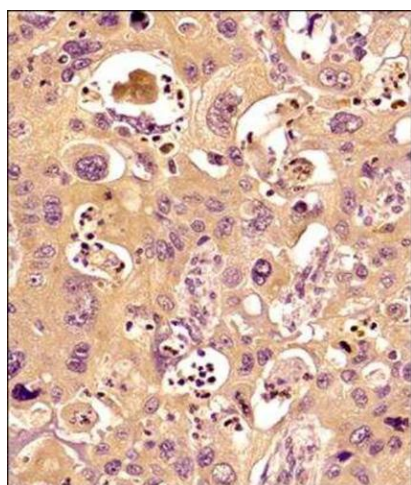
Druggable Genome, Protease

Protein Pathways:

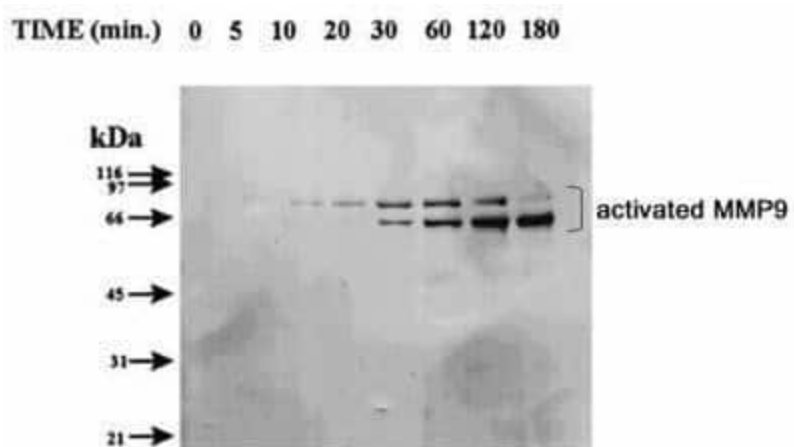
Bladder cancer, Leukocyte transendothelial migration, Pathways in cancer

Product images:


Immunohistochemistry-Paraffin: MMP-9 Antibody (4A3) TA336901 - Analysis of a FFPE section of human esophageal cancer using MMP9 antibody (clone 4A3) at 1:200. The staining was developed with HRP-labelled secondary antibody and DAB reagent followed by hematoxylin counterstaining. This antibody clone generated an extracellular and cytoplasmic staining mainly in the cancer cells while the signal was very weak in the stromal cells of the tumor.



Immunohistochemistry-Paraffin: MMP-9 Antibody (4A3) TA336901 - Analysis of a FFPE tissue section of human esophageal cancer using MMP9 antibody (clone 4A3) at 1:200. The staining was developed with HRP-labelled secondary antibody and DAB reagent followed by hematoxylin counterstaining. This antibody generated a specific extracellular and cytoplasmic staining primarily in the cancer cells while the signal was pretty weak in the tumor stroma.



Western Blot: MMP-9 Antibody (4A3) TA336901 - Analysis of activated MMP9 expression in MMP9 proenzyme incubated with trypsin for various times.