Anti-MMP-9 Antibody [JA80-73] - BSA and Azide free

HA750420

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Tissue, IHC-P, FC
Molecular Wt:	Predicted band size: 78 kDa
Clone number:	JA80-73

Description: The matrix metalloproteinases (MMPs) are a family of peptidase pathway responsible for the degradation of extracellular matrix components, including collagen, gelatin, fibronectin, laminin and proteoglycan. Transcription of MMP genes is is differentially activated by phorbol ester, lipopolysaccharide (LPS) or staphylococcal enterotoxin MMP-9 (also designated 92 kDa type IV collagenase or gelatinase B) has been shown to degrade bone collagens in concert with MMP-1 (also specified interstitial collagenase, fibroblast collagenase or Collagenase-1), and cysteine proteases and may play a role in bone osteoclastic resorption. MMP-1 is downregulated by p53, and abnormality of p53 expression can contribute to joint degradation in rheumatoid arthritis by regulating MMP-1 expression.

Immunogen: Synthetic peptide within Human MMP9 aa 71-120 / 707.

Positive control: THP-1 treated with 200nM TPA for 10 minutes whole cell lysate, rat lung tissue lysate, rat spleen tissue lysate, human tonsil tissue, A549-si-NT+TPA(80nM 24h) cell lysate, human spleen tissue, Hela, SHG-44, A431.

Subcellular location: Secreted.

Database links: SwissProt: P14780 Human | P41245 Mouse | P50282 Rat

Recommended Dilutions:

WB	1:5,000-1:10,000
IF-Tissue	1:200-1:500
IHC-P	1:1,000
FC	1:500-1:1,000

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

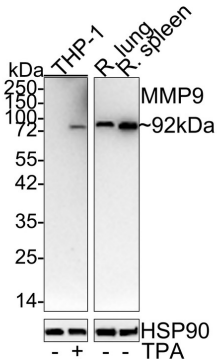

Fig1: Western blot analysis of MMP-9 on different lysates with Rabbit anti-MMP-9 antibody (HA750420) at 1/5,000 dilution.

Lane 1: THP-1 whole cell lysate (20 µg/Lane)
Lane 2: THP-1 treated with 200nM TPA for 10 minutes whole cell lysate (20 µg/Lane)
Lane 3: Rat lung tissue lysate (20 µg/Lane)
Lane 4: Rat spleen tissue lysate (20 µg/Lane)

Predicted band size: 78 kDa
Observed band size: 92 kDa

Exposure time: 2 minutes;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750420) at 1/5,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

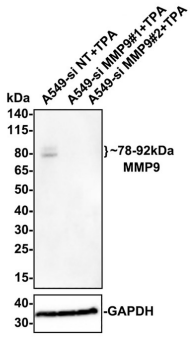

Fig2: Western blot analysis of MMP9 on different lysates with Rabbit anti-MMP9 antibody (HA750420) at 1/5,000 dilution.

Lane 1: A549-si NT+TPA(80nM 24h) cell lysate, 15 µg/Lane
Lane 2: A549-si MMP9#1+TPA(80nM 24h) cell lysate, 15 µg/Lane
Lane 3: A549-si MMP9#2+TPA(80nM 24h) cell lysate, 15 µg/Lane

Predicted band size: 78 kDa
Observed band size: 78-92 kDa

Exposure time: 1 minute 40 seconds;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM in TBST for 1 hour at room temperature. The primary antibody (ET1704-69, 1/5,000) and Loading control antibody (Rabbit anti-GAPDH, ET1601-4, 1/10,000) were used in 5% BSA at room temperature for 2 hours. Goat Anti-rabbit IgG-HRP Secondary Antibody (HA1001) at 1/100,000 dilution was used for 1 hour at room temperature.

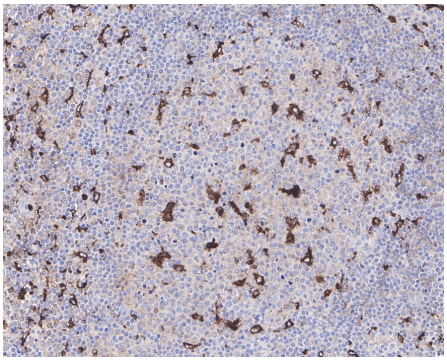

Fig3: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Rabbit anti-MMP-9 antibody (HA750420) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750420) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

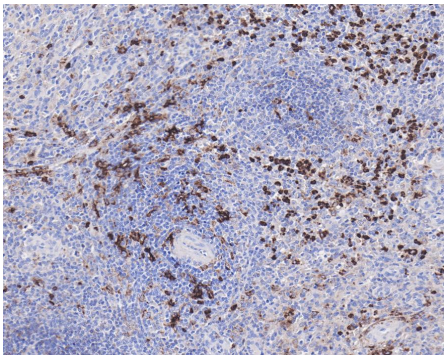

Fig4: Immunohistochemical analysis of paraffin-embedded human spleen tissue with Rabbit anti-MMP-9 antibody (HA750420) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750420) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

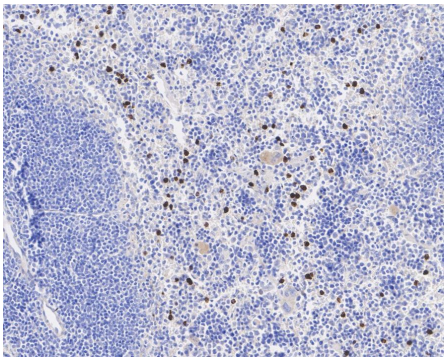

Fig5: Immunohistochemical analysis of paraffin-embedded mouse spleen tissue with Rabbit anti-MMP-9 antibody (HA750420) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750420) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

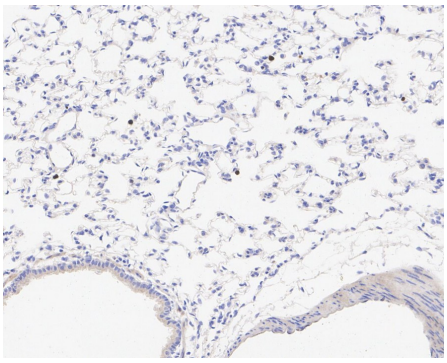

Fig6: Immunohistochemical analysis of paraffin-embedded rat lung tissue with Rabbit anti-MMP-9 antibody (HA750420) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750420) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

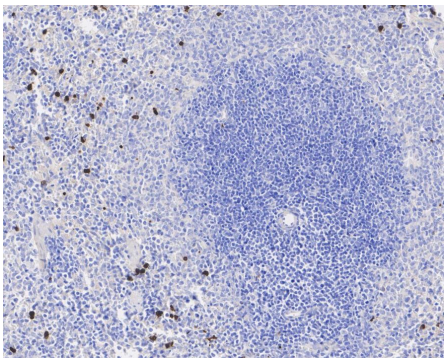

Fig7: Immunohistochemical analysis of paraffin-embedded rat spleen tissue with Rabbit anti-MMP-9 antibody (HA750420) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750420) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

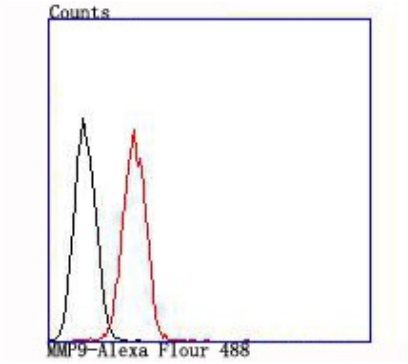

Fig8: Flow cytometric analysis of MMP-9 was done on A431 cells. The cells were fixed, permeabilized and stained with the primary antibody (HA750420, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated Goat anti-Rabbit IgG Secondary antibody at 1/1000 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Xu L et al. Umbilical cord-derived mesenchymal stem cells on scaffolds facilitate collagen degradation via upregulation of MMP-9 in rat uterine scars. Stem Cell Res Ther 8:84 (2017).
2. Gong L et al. Transthyretin regulates the migration and invasion of JEG-3 cells. Oncol Lett 13:1242-1246 (2017).