

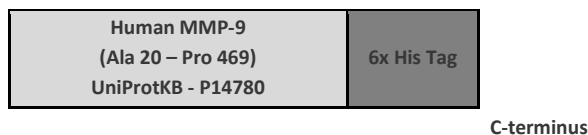
Human CellExp™, MMP-9, human recombinant

CATALOG #:	7246-10	10 µg
	7246-50	50 µg
	7246-250	250 µg
	7246-1000	1000 µg

ALTERNATE NAMES: MMP9, CLG4B, GELB, MANDP2, Matrix Metalloproteinase-9, macrophage gelatinase, collagenase IV, collagenase type IV, type IV collagen metalloproteinase

SOURCE: HEK 293 cells (Ala 20 – Pro 469)
PURITY: ≥ 95% by SDS-PAGE gel
FORM: Lyophilized
FORMULATION: Lyophilized from 0.22 µm filtered PBS (pH 7.4) with 5% trehalose.

MOL. WEIGHT: This protein has 450 amino acids with a 6x His tag at C-terminus, and a calculated MW of 51 kDa. The N-terminal is Ala 20. The protein migrates to ~60 kDa under reducing conditions (SDS-PAGE) due to glycosylation.



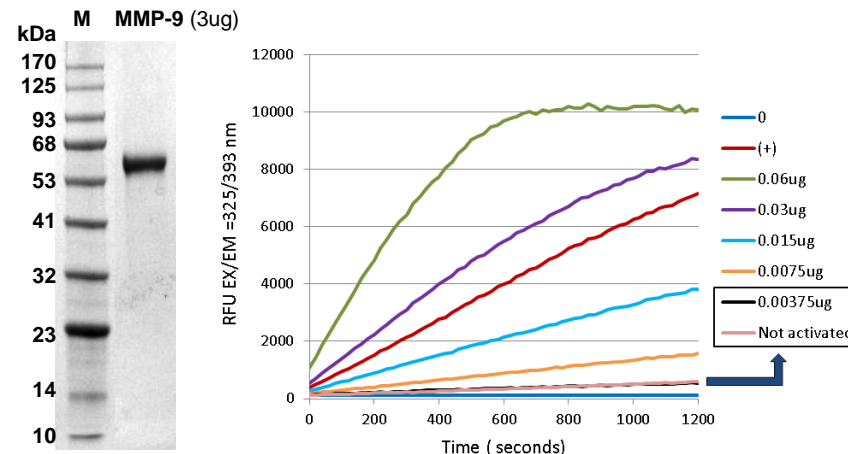
Pre-activation is required for enzymatic assays with or without APMA. Dilute human MMP-9 to 100 µg/mL in TCNB buffer (50 mM Tris, 10 mM CaCl₂, 150 mM NaCl, 0.05% Brij-35 (w/v), pH 7.5), then add 20 mM APMA (4-Aminophenylmercuric acetate, prepared in DMSO at 20 mM) to a final concentration of 1 mM. Keep the enzyme with APMA for 0.5-1 hour at 37°C. The optimal treatment time may need to be determined empirically. Alternatively, activation can be done **without APMA** for 0.5 hour at 37°C using BioVision's MMP-9 Assay Buffer (25 ml) (Cat. No. K844-100-1).

Note: Concentration of APMA higher than 20 mM is not recommended due to its limited solubility.

STORAGE CONDITIONS: Store at -20°C. After reconstitution, the solution can be stored at 2-8°C for up to 1 month. For extended storage, aliquot and store at -20°C and use within 3 months. Avoid repeated freeze-thaw cycles.

RECONSTITUTION: Centrifuge the vial prior to opening. Reconstitute in sterile PBS (pH 7.4). Do not vortex.

DESCRIPTION: Matrix metalloproteinase 9 (MMP-9) is secreted from neutrophils, macrophages and a number of transformed cells. It is the most complex MMP family member in terms of domain structure and regulation of its activity. MMP family is involved in the breakdown of extracellular matrix in normal physiological processes as well as in disease processes. Most MMPs are secreted as inactive pro-proteins which are activated by the cleavage of extracellular proteinases. MMP-9 degrades various substrates including gelatin, collagen types IV and V, and elastin. It is involved in inflammatory responses, tissue remodeling, wound healing, tumor growth and diseases including systemic lupus erythematosus, rheumatoid arthritis, and multiple sclerosis. MMP-9 is regarded as a potential therapeutic target and a biomarker of disease status.



(Left) SDS-PAGE (4-20%) of Recombinant MMP-9: 3ug of MMP-9 loaded under reducing conditions and stained with Coomassie Blue, which shows a MW of ~60 kDa. **(Right) Assay of MMP-9 activity:** Different amount of activated MMP-9 were incubated with substrate Mca-PLGL-Dpa-AR-NH₂ in a 100 µl reaction using BioVision's kit Cat. No. K844, see related products below. The fluorescence (Ex/Em 325/393 nm) was monitored over a 20 min time period.

RELATED PRODUCTS:

- MMP-9 Inhibitor Screening Kit (Fluorometric) (Cat. No. K844)
- MMP-1, Human CellExp™, Human Recombinant (Cat. No. 7244-10)
- QuickDetect™ MMP-9 (Human) ELISA Kit (Cat. No. K4427)
- MMP-9, Active, human recombinant (Cat. No. 7867)
- MMP-9 Blocking Peptide (Cat. No. 3529BP)
- MMP-9 Antibody (Cat. No. 5565)
- MMP-9, Human Recombinant (Cat. No. 7789)

FOR RESEARCH USE ONLY! Not to be used in humans

