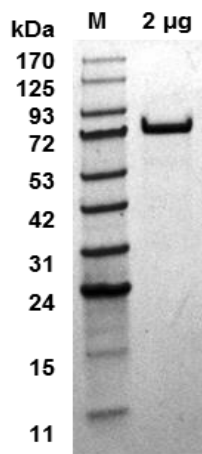


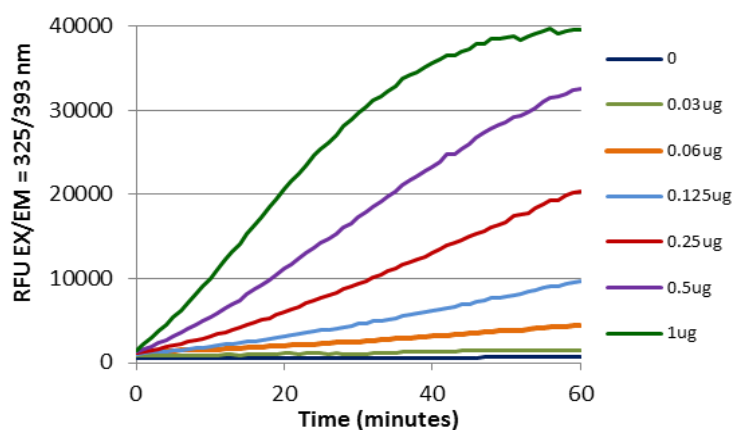
Human CellExp™ MMP-2, Human Recombinant

rev 04/21

CATALOG NO:	7245-10 10 µg 7245-50 50 µg
ALTERNATE NAMES:	MMP2, Matrix metalloproteinase-2, 72 kDa type IV collagenase, 72 kDa gelatinase, Gelatinase A, TBE-1, CLG4A, EC:3.4.24.24
MOL. WT.	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.
SOURCE:	HEK 293 cells (Ala 30 – Cys 660)
PURITY:	≥ 95% SDS-PAGE
FORM:	Lyophilized
FORMULATION:	Lyophilized from 0.22 µm filtered PBS (pH 7.4) with 5% trehalose
RECONSTITUTION:	Centrifuge the vial prior to opening. Reconstitute in sterile PBS (pH 7.4). Do not vortex.
PRE-ACRIVATION:	<p>Pre-activation is required for enzymatic assays with or without APMA. Dilute human MMP-2 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). 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 MMP-2 Assay Buffer (BioVision Cat# K844-100-1).</p> <p>Note: Concentration of APMA higher than 20 mM is not recommended due to its limited solubility.</p>
SPECIFIC ACTIVITY:	> 2 mU/mg
UNIT DEFINITION:	One unit of MMP-2 Activity is defined as the amount of enzyme that releases 1 µmol of MCA from substrate per min at 37 °C.
STORAGE CONDITIONS:	Store at -20 °C. After reconstitution, the enzyme 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.
DESCRIPTION:	Matrix metalloproteinase-2 (MMP-2) is also known as 72 kDa type IV collagenase, 72 kDa gelatinase, Gelatinase A and CLG4A, which belongs to the peptidase M10A family. MMP-2 is involved in the cleavage of gelatin type I and collagen types IV, V, VII, X. MMP-2 cleaves the collagen-like sequence Pro-Gln-Gly- -Ile-Ala-Gly-Gln and also cleaves KISS at a Gly- -Leu bond. MMP-2 plays a role in diverse functions such as remodeling of the vasculature, angiogenesis, tissue repair, tumor invasion, inflammation and atherosclerotic plaque rupture. The circulating MMP-2 and MMP-9 levels may be a useful marker for the identification of patients at risk for heart failure.
AMINO ACID SEQUENCE:	Ala 30 – Cys 660



SDS-PAGE (4-20%) of Recombinant MMP-2: 2 µg of MMP-2 loaded under reducing conditions and stained with Coomassie Blue. Lane M-MW marker.



Specific activity of MMP-2: Different amount of activated MMP-2 were incubated with FRET-based substrate using BioVision's MMP-9 Inhibitor Screening Kit (Fluorometric) (BioVision Cat# K844-100). It can also be tested using MMP-2 Inhibitor Screening Kit (Fluorometric) (BioVision Cat# K2017-100). The fluorescence (Ex/Em = 325/393 nm) was monitored over a 60 min time period. The specific activity of MMP-2 is > 2 mU/mg.

RELATED PRODUCTS:

- MMP-2 (Rat) ELISA Kit (E4724)
- Pro-MMP-2, mouse (7780)
- MMP-2 (Human) ELISA Kit (E4723)
- MMP-2, human recombinant (7782)
- MMP-2 Antibody (5562)
- MMP-9 Inhibitor Screening Kit (Fluorometric) (K844)

FOR RESEARCH USE ONLY! Not to be used on humans.