

Active Matrix Metalloproteinase 9 (MMP9) Instruction Manual

SBPA145Po01

Sus scrofa; Porcine (Pig)

Buffer Formulation

20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.

Traits

Freeze-dried powder

Purity

> 90%

Isoelectric Point

4.8

Applications

Cell culture; Activity Assays.

ACTIVITY TEST

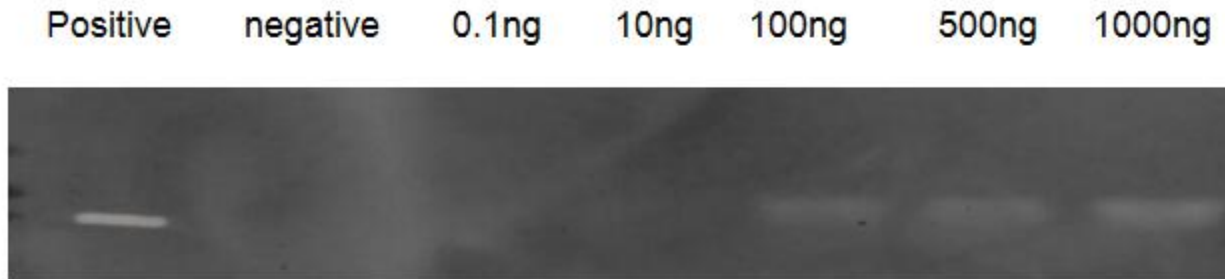


Figure. Hydrolysis of gelatin by MMP9. Mechanism: MMP9 is a zinc-dependent enzymes capable of cleaving components of the extracellular matrix, which belongs to the matrix metalloproteinase (MMP) family. It is a gelatinase A, 92kDa type IV collagenase which can hydrolyze gelatin under certain conditions. Gelatin zymography is mainly used for the detection of the gelatinases, MMP-2 and MMP-9 and It is extremely sensitive because levels of 10pg of MMP-2 can already be detected. Briefly, various concentrations of recombinant pig MMP9 (1000ng, 500ng, 100ng, 10ng, 1ng, 0.1ng) were denatured by SDS loading buffer, electrophoresed through sodium dodecylsulphate-polyacrylamide gel (SDS-PAGE; 10% gels) containing gelatin (1mg/mL) with nonreducing conditions. After renaturation, incubation and CCB-stained, active MMP9 would hydrolyze gelatin nearby, which was indicated by the white binds on the gel. In this experiment we use heat-denatured MMP9 protein as negative control, and blood sample as positive control. Result: Gelatin hydrolysis by recombinant pig MMP9 (10-70kd) was shown in figure 1.

USAGE

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

STORAGE

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

STABILITY

The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

Image

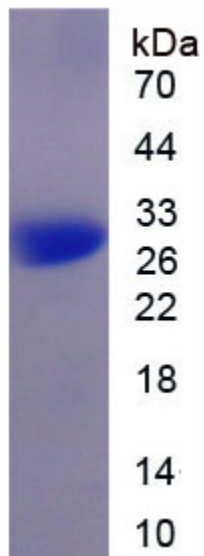


Figure. SDS-PAGE

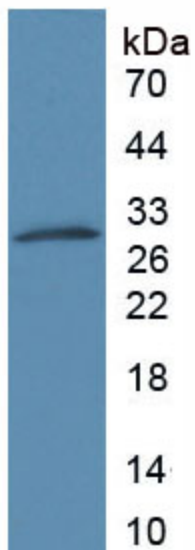


Figure. Western Blot

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.