Creative Enzymes®

Matrix Metalloproteinase-9 from Human, Recombinant

Cat. No. NATE-0863

Lot. No. (See product label)

Introduction

Description Matrix metalloproteinases are members of a unique family of proteolytic enzymes that have a zinc ion at their active sites and can degrade collagens, elastin and other components of the extracellular matrix (ECM). These enzymes are present in normal healthy individuals and have been shown to have an important role in processes such as wound healing, pregnancy, and bone resorption. However, overexpression and activation of MMPs have been linked with a range of pathological processes and disease states involved in the breakdown and remodeling of the ECM. Such diseases include tumor invasion and metastasis, rheumatoid arthritis, periodontal disease and vascular processes such as angiogenesis, intimal hyperplasia, atherosclerosis and aneurysms. Recently, MMPs have been linked to neurodegenerative diseases such as Alzheimer's, and amyotrophic lateral sclerosis (ALS). Natural inhibitors of MMPs, tissue inhibitor of matrix metalloproteinases (TIMPs) exist and synthetic inhibitors have been developed which offer hope of new treatment options for these diseases.

Applications Immunoblotting (1 µg protein/lane) Substrate Cleavage Assay (1 µg protein/lane) Zymography (1 µg protein/lane)

Synonyms Gelatinase B; EC 3.4.24.35; 92-kDa gelatinase; matrix metalloproteinase 9; type V collagenase; 92-kDa type IV collagenase; macrophage gelatinase; 95 kDa type IV collagenase/gelatinase; collagenase IV; collagenase type IV; gelatinase MMP 9; MMP 9; type IV collagen metalloproteinase

Product Information

Species Human

Source CHO Cells

Form Liquid

EC Number EC 3.4.24.35

CAS No. 146480-36-6

Molecular Weight 92 kDa

Purity >90% by SDS-PAGE

Activity >1,300 pmoles/min/µg

Buffer In 150 mM NaCl, 50 mM Tris-HCl, 10 mM $CaCl_2$, 0.05% BRIJ-35 Detergent, pH 7.5.

Unit Definition Specific activity is determined using 10 µM (7-methoxycoumarin-4-yl) acetyl-Pro-Leu-Gly-Leu-(3-[2, 4-dinitrophenyl]-L-2, 3-diaminopropionyl)-Ala-Arg-NH_2 (excitation 320 nm, emission 405 nm), and 20 ng enzyme in 100 µl of 50 mM Tris-HCl, pH 7.5, 10 mM $CaCl_2$, 150 mM NaCl, and 0.05% BRIJ-35 Detergent at room temperature.

Storage and Shipping Information

Storage < -70°C; Avoid freeze/thaw