

Human MMP-9 / CLG4B Antibody (Biotin),

Rabbit MAb

Catalog Number: 10327-R043B



Sino Biological Inc.

Biological Solution Specialist

General Information

Immunogen:	Recombinant Human MMP-9 protein (Catalog#10327-H08H)
Clone ID:	043
Ig Type:	Rabbit IgG
Applications:	ELISA
Specificity:	Human MMP-9
Formulation:	0.2 µm filtered solution in PBS with 3% BSA
Storage:	< -20°C

Preparation

This antibody was obtained from a rabbit immunized with purified, recombinant Human matrix metalloproteinase 9 (rh MMP-9; Catalog#10327-H08H; Met 1-Asp 707; NP_004985.2) and then biotinylated.

Applications

Direct ELISA – This biotinylated antibody can be used as a detectin reagent in a human MMP-9 sandwich immunoassay in combination with a MMP-9 capture antibody and recombinant human MMP-9 (Catalog#10327-H08H) as the standard. The suggested concentration range for this detection reagent is 0.2-1 µg/mL and should be titrated to determine the the optimal concentration.

Specificity

Human MMP-9

Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free.**

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

Background

Matrix metalloproteinases (MMPs) are neutral proteinases that are involved in the breakdown and remodeling of the extracellular matrix (ECM) under a variety of physiological and pathological conditions, such as morphogenesis, differentiation, angiogenesis and tissue remodeling, as well as pathological processes including inflammation, arthritis, cardiovascular diseases, pulmonary diseases and tumor invasion. MMP9, also known as 92-kDa gelatinase B/type IV collagenase, is secreted from neutrophils, macrophages, and a number of transformed cells, and is the most complex family member in terms of domain structure and regulation of its activity. It plays an important role in tissue remodelling in normal and pathological inflammatory processes. MMP-9 is a major secretion product of macrophages and a component of cytoplasmic granules of neutrophils, and is particularly important in the pathogenesis of inflammatory, infectious, and neoplastic diseases in many organs including the lung. This enzyme is also secreted by lymphocytes and stromal cells upon stimulation by inflammatory cytokines, or upon delivery of bi-directional activation signals following integrin-mediated cell-cell or cell-extracellular matrix (ECM) contacts. Since the integrity of the tissue architecture is closely dependent of the delicate balance between MMPs and their inhibitors, excessive production of MMP-9 is linked to tissue damage and degenerative inflammatory disorders. As a consequence, regulation of gene transcription and tissue-specific expression of MMP-9 in normal and diseased states are being actively investigated to pave the way for new therapeutic targets. In addition, the dramatic overexpression of MMP-9 in cancer and various inflammatory conditions clearly points to the molecular mechanisms controlling its expression as a potential target for eventual rational therapeutic intervention.

Reference

St-Pierre Y, *et al.* (2003) Emerging features in the regulation of MMP-9 gene expression for the development of novel molecular targets and therapeutic strategies. *Curr Drug Targets Inflamm Allergy*. 2(3): 206-15.

St-Pierre Y, *et al.* (2004) Regulation of MMP-9 gene expression for the development of novel molecular targets against cancer and inflammatory diseases. *Expert Opin Ther Targets*. 8(5): 473-89.

Chakrabarti S, *et al.* (2005) Matrix metalloproteinase-2 (MMP-2) and MMP-9 in pulmonary pathology. *Exp Lung Res*. 31(6): 599-621.

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