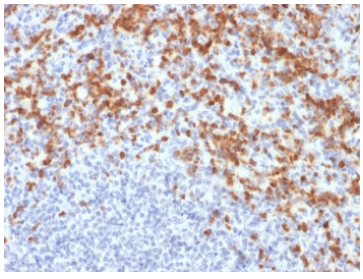
MMP9/Matrix metalloproteinase-9 Antibody [clone MMP9/2477] (V7962)

Catalog No.	Formulation	Size
V7962-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7962-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7962SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	MMP9/2477
Purity	Protein G affinity chromatography
UniProt	P14780
Localization	Cytoplasmic, nuclear, secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This MMP9/Matrix metalloproteinase-9 antibody is available for research use only.



Immunohistochemistry analysis of MMP9 / Matrix metalloproteinase-9 antibody (clone MMP9/2477) in human spleen tissue. FFPE human spleen section shows prominent cytoplasmic brown chromogenic staining in scattered immune cells within the splenic parenchyma, consistent with MMP9 expression, while surrounding lymphoid cells exhibit minimal staining and nuclei appear blue. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes followed by cooling prior to staining.

Description

MMP9 antibody targets Matrix metalloproteinase-9, a secreted zinc-dependent endopeptidase encoded by the human MMP9 gene and a prominent member of the matrix metalloproteinase family. Matrix metalloproteinase-9, also commonly referred to as MMP-9 and gelatinase B in the literature, is primarily localized to the extracellular space where it degrades structural components of the extracellular matrix. MMP9 antibody is widely used in studies of tumor invasion, inflammation, angiogenesis, and tissue remodeling because of the enzyme's central role in extracellular matrix turnover.

MMP-9 is synthesized as a proenzyme that undergoes proteolytic activation to generate the catalytically active form. It efficiently cleaves type IV collagen, gelatin, elastin, and additional basement membrane substrates, facilitating cell migration and extracellular matrix reorganization. Gelatinase B activity is tightly regulated by tissue inhibitors of metalloproteinases, particularly TIMP1, which balance proteolytic activity during normal tissue repair. Dysregulated MMP9 expression contributes to cancer metastasis, chronic inflammatory diseases, cardiovascular remodeling, and blood-brain barrier disruption. MMP9 antibody is therefore valuable for investigating protease-driven pathological processes.

MMP9 is highly expressed in neutrophils, macrophages, and activated endothelial cells, especially under inflammatory stimulation. In oncology research, increased Matrix metalloproteinase-9 levels correlate with tumor progression and poor clinical outcome across multiple cancer types. Beyond cancer, MMP-9 also plays important roles in wound healing, immune cell trafficking, and vascular remodeling.

Structurally, Matrix metalloproteinase-9 contains a signal peptide, propeptide region, catalytic zinc-binding domain, fibronectin type II repeats that enhance gelatin binding, and a hemopexin-like C-terminal domain that contributes to substrate specificity and protein interactions. An MMP9 antibody is suitable for detecting Matrix metalloproteinase-9 expression in extracellular matrix remodeling, inflammation, and tumor biology research applications.

Application Notes

Optimal dilution of the MMP9/Matrix metalloproteinase-9 antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 22-166) was used as the immunogen for this MMP9/Matrix metalloproteinase-9 antibody.

Storage

Store the MMP9/Matrix metalloproteinase-9 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

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