

Mouse MMP-9 Antibody Pair Set

Catalog No.	E-KAB-0092	Applications	ELISA
Synonyms	MMP9, CLG4B, Gelatinase B, GELB, MANDP2, 92kDa Type IV Collagenase, 92 KDa Gelatinase		

Kit components & Storage

Title	Specifications	Storage
Mouse MMP-9 Capture Antibody	1 vial, 100 µg	Store at -20°C. Avoid freeze/thaw cycles.
Mouse MMP-9 Detection Antibody (Biotin)	1 vial, 50 µL	Store at -20°C. Avoid freeze/thaw cycles.

Note: Centrifuge before opening to ensure complete recovery of vial contents.

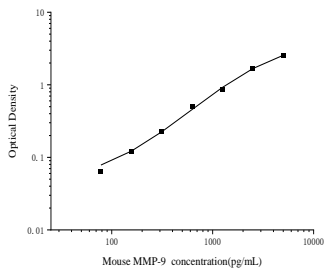
Product Information

Items		Characteristic (E-KAB-0092)	
		Mouse MMP-9 Capture Antibody	Mouse MMP-9 Detection Antibody (Biotin)
Immunogen Information	Immunogen	Recombinant Mouse MMP-9 protein	Recombinant Mouse MMP-9 protein
	Swissprot	P41245	
Product details	Reactivity	Mouse	Mouse
	Host	Rat	Rat
	Conjugation	Unconjugated	Biotin
	Concentration	0.5 mg/mL	/
	Buffer	PBS with 0.04% Proclin 300, 50% glycerol, pH 7.4	PBS with 0.04% Proclin 300; 1% protective protein; 50% glycerol; pH 7.4
	Purify	Protein A or G	Protein A or G
Specificity	Detects Mouse MMP-9 in ELISAs.		

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Applications

Mouse MMP-9 Sandwich ELISA Assay

	Recommended Concentration/Dilution	Reagent	Images										
ELISA Capture	0.5-4 µg/mL	Mouse MMP-9 Capture Antibody	 <p>The graph displays a standard curve for the Mouse MMP-9 Sandwich ELISA Assay. The x-axis represents Mouse MMP-9 concentration in pg/mL on a logarithmic scale from 10 to 10000. The y-axis represents Optical Density on a logarithmic scale from 0.01 to 10. The data points form a smooth, upward-sloping curve, indicating a positive correlation between the concentration of MMP-9 and the resulting optical density.</p> <table border="1"> <caption>Approximate data points from the standard curve</caption> <thead> <tr> <th>Mouse MMP-9 concentration (pg/mL)</th> <th>Optical Density</th> </tr> </thead> <tbody> <tr><td>10</td><td>0.05</td></tr> <tr><td>100</td><td>0.15</td></tr> <tr><td>1000</td><td>0.5</td></tr> <tr><td>10000</td><td>1.5</td></tr> </tbody> </table>	Mouse MMP-9 concentration (pg/mL)	Optical Density	10	0.05	100	0.15	1000	0.5	10000	1.5
Mouse MMP-9 concentration (pg/mL)	Optical Density												
10	0.05												
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1000	0.5												
10000	1.5												
ELISA Detection	1:1000-1:10000	Mouse MMP-9 Detection Antibody (Biotin)											

Note: This standard curve is only for demonstration purposes. A standard curve should be generated for each assay!

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 some 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 remodeling 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 on 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. Besides, the dramatic overexpression of MMP-9 in cancer and various inflammatory conditions points to the molecular mechanisms controlling its expression as a potential target for eventual rational therapeutic intervention.

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