Matrix Metalloproteinase 2 (MMP2) Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	Matrix Metalloproteinase 2 (MMP2), Monoclonal Antibody
Full Product Name	APC_Cy7-Linked Monoclonal Antibody to Matrix Metalloproteinase 2 (MMP2)
Product Gene Name	anti-MMP2 antibody
Product Synonym Names	Matrix Metalloproteinase 2; CLG4; CLG4A; MMP-II; MONA; TBE-1; PEX; Gelatinase A; 72kDa Gelatinase; 72kDa Type IV Collagenase
Clonality	Monoclonal
Isotype	IgG1 Kappa
Clone Number	A5
Host	Mouse
Species Reactivity	Human
Form/Format	Liquid. 0.01M PBS, pH7.4, containing 0.05% Proclin-300, 50% glycerol.
Purity/Purification	Protein A + Protein G affinity chromatography
Concentration	>=0.1mg/mL (Please refer to the vial label for the specific concentration.) (lot specific)
Preparation and Storage	Store at 2 degree C to 8 degree C for frequent use, -20 degree C for 12 months Stable for 12 months if correctly stored.
Matching Pairs	Antibody: MMP2 Clone #A5 (MBS2151000) Immunogen: MMP2 (MBS2010361)
Molecular Weight	73,882 Da
Immunogen Sequence Positions	Tyr110~Cys660
Chromosome Location	Chromosome: 16; NC_000016.9 (55513081..55540586). Location: 16q13-q21
OMIM	120360
3D Structure	ModBase 3D Structure for P08253
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Conjugation	APC Cy7
Product Categories/Family for anti-MMP2 antibody	Monoclonal Antibodies (Primary Abs); Primary, APC_Cy7-conjugated; Enzyme & Kinase
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Applications Tested/Suitable for anti-MMP2 antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Immunoprecipitation (IP)
Application Notes for anti-MMP2 antibody	WB: 0.01-2ug/mL IHC: 5-20ug/mL ICC: 5-20ug/mL
Related Product Information for anti-MMP2 antibody	MBS2151000 is an antibody targeting MMP2. Also known as APC_Cy7-Linked Monoclonal Antibody to Matrix Metalloproteinase 2 (MMP2). Reactive in Human. Host: Mouse.

Other Notes	Small volumes of anti-MMP2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MMP2. It may not necessarily be applicable to this product.

NCBI GI #	189217853
NCBI GeneID	4313
NCBI Accession #	NP_001121363.1
UniProt Primary Accession #	P08253
UniProt Secondary Accession #	Q9UCJ8; B2R6U1; B4DWH3; E9PE45
UniProt Related Accession #	P08253
GenBank Nucleotide #	NM_001127891.1
NCBI Official Full Name	72 kDa type IV collagenase isoform b
NCBI Official Synonym Full Names	matrix metallopeptidase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)
NCBI Official Symbol	MMP2
NCBI Official Synonym Symbols	CLG4; MONA; CLG4A; TBE-1; MMP-II
UniProt Protein Name	72 kDa type IV collagenase
UniProt Synonym Protein Names	72 kDa gelatinase; Gelatinase A; Matrix metalloproteinase-2; MMP-2; TBE-1
Protein Family	72 kDa type IV collagenase
UniProt Gene Name	MMP2
UniProt Synonym Gene Names	CLG4A; MMP-2
UniProt Entry Name	MMP2_HUMAN
NCBI Protein Information	72 kDa type IV collagenase; MMP-2; gelatinase A; 72 kDa gelatinase; collagenase type IV-A; neutrophil gelatinase; matrix metalloproteinase-2; matrix metalloproteinase-II
NCBI Summary for MMP2	Proteins of the matrix metalloproteinase (MMP) family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. Most MMP's are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. This gene encodes an enzyme which degrades type IV collagen, the major structural component of basement membranes. The enzyme plays a role in endometrial menstrual breakdown, regulation of vascularization and the inflammatory response. Mutations in this gene have been associated with Winchester syndrome and Nodulosis-Arthropathy-Osteolysis (NAO) syndrome. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

UniProt Comments for MMP2	MMP2: Ubiquitinous metalloproteinase that is involved in diverse functions such as remodeling of the vasculature, angiogenesis, tissue repair, tumor invasion, inflammation, and atherosclerotic plaque rupture. As well as degrading extracellular matrix proteins, can also act on several nonmatrix proteins such as big endothelial 1 and beta-type CGRP promoting vasoconstriction. Also cleaves KISS at a Gly-|-Leu bond. Appears to have a role in myocardial cell death pathways. Contributes to myocardial oxidative stress by regulating the activity of GSK3beta. Cleaves GSK3beta in vitro. Interacts (via the C-terminal hemopexin-like domains- containing region) with the integrin alpha-V/beta-3; the interaction promotes vascular invasion in angiogenic vessels and melamoma cells. Interacts (via the C-terminal PEX domain) with TIMP2 (via the C-terminal); the interaction inhibits the degradation activity. Interacts with GSK3B. Aspirin appears to inhibit expression. Produced by normal skin fibroblasts. PEX is expressed in a number of tumors including gliomas, breast and prostate. Inhibited by histatin-3 1/24 (histatin-5). Belongs to the peptidase M10A family. Protein type: Cell development/differentiation; Apoptosis; Motility/polarity/chemotaxis; Protease; Secreted, signal peptide; EC 3.4.24.24; Secreted Chromosomal Location of Human Ortholog: 16q12.2 Cellular Component: proteinaceous extracellular matrix; extracellular space; sarcomere; mitochondrion; extracellular region; plasma membrane; nucleus Molecular Function: protein binding; zinc ion binding; metalloendopeptidase activity; serine-type endopeptidase activity Biological Process: axon guidance; extracellular matrix organization and biogenesis; intramembranous ossification; proteolysis; blood vessel maturation; collagen catabolic process; extracellular matrix disassembly; cellular protein metabolic process; positive regulation of innate immune response; response to hypoxia; ephrin receptor signaling pathway; angiogenesis; embryo implantation Disease: Multicentric Osteolysis, Nodulosis, And Arthropathy
Research Articles on MMP2	**1.** analysis revealed that MDR1 expression in lymph node was not correlated with MMP-2 expression in lymph node, number of metastasized lymph nodes and tumor size
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