bs-1856R **[Primary Antibody]**

MMP16 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 4325 **SWISS:** P51512

Target: MMP16

Immunogen: KLH conjugated synthetic peptide derived from human MMP-16: 501-607/607. < Extracellular >

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: The matrix metalloproteinases (MMPs) are a family of at least eighteen secreted and membrane bound zinc endopeptidases. Collectively, these enzymes can degrade all the components of the extracellular matrix, including fibrillar and non fibrillar collagens, fibronectin, laminin and basement membrane glycoproteins. In general, a signal peptide, a propeptide, and a catalytic domain containing the highly conserved zinc binding site characterizes the structure of the MMPs. In addition, fibronectin like repeats, a hinge region, and a C terminal hemopexin like domain allow categorization of MMPs into the collagenase, gelatinase, stomelysin and membrane type MMP subfamilies. All MMPs are synthesized as proenzymes, and most of them are secreted from the cells as proenzymes. Thus, the activation of these proenzymes is a critical step that leads to extracellular matrix breakdown. MMPs are considered to play an important role in wound healing, apoptosis, bone elongation, embryo development, uterine involution, angiogenesis and tissue remodeling, and in diseases such as multiple sclerosis, Alzheimer's, malignant gliomas, lupus, arthritis, periodontis, glumerulonephritis, atherosclerosis, tissue ulceration, and in cancer cell invasion and metastasis.
MMP16 induces the activation of pro gelatinase A (MMP2). It was identified as a membrane bound Metalloproteinase in normal and tumor cell lines. MMP16 is similar to the other MtMMPs; it contains a furin cleavage site, is membrane bound, and contains a cytoplasmic tail (MT4MMP lacks the tail, and may not be intercalated into the membrane). MMP16 is also known to be "shed" from the membrane in a soluble form. MT1MMP is known to function in activating a number of MMPs, chiefly MMP2, but that role has not been well described for the other MTMMPs. MMP16 has been reported to be elevated in several tumor cell lines, and is constituitively produced by some normal cell lines.

Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
ELISA (1:5000-10000)

Reactivity: (predicted: Human, Mouse, Rat, Rabbit, Pig, Cow, Chicken, Dog, Horse)

Predicted MW.: 56 kDa

Subcellular Location: Extracellular matrix ,Cell membrane

SELECTED CITATIONS

- **[IF=3.743]** Lou L et al. MiRNA-192-5p attenuates airway remodeling and autophagy in asthma by targeting MMP-16 and ATG7. Biomed Pharmacother. 2020 Feb;122:109692. WB ;Mouse. 31918268
- **[IF=2.98]** Oktem et al. Cancer stem cell differentiation: TGFβ1 and versican may trigger molecules for the organization of tumor spheroids. (2014) Oncol.Rep. 32:641-9 IHC,WB ;Human. 24927163
- **[IF=2.311]** Cuina Hanet al. Associations between the expression of SCCA, MTA1, P16, Ki-67 and the infection of high-risk HPV in cervical lesions. Oncol Lett . 2020 Jul;20(1):884-892. IHC ;Human. 32566016
- **[IF=1.39]** Meng et al. Epigallocatechin-3-gallate inhibits growth and induces apoptosis in esophageal cancer cells

through the demethylation and reactivation of the p16 gene. (2017) Oncol.Let. 14:1152-1156 WB ;Human. 28693288