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Date: 10/28/2010

Anti-Matrix Metalloproteinase 17, Rabbit-Polyclonal Antibody

Catalog No. GB-10042 **Quantity:** 250µl **Applications tested:** ELISA
Antigen species: Mouse **Reactivity:** Human, mouse
Host species: Rabbit **Form:** Antiserum

Target description

atrix metalloproteinases (MMPs) are believed to lay a central role in the breakdown of ECM, which is essential for embryonic development, morphogenesis, and tissue remodeling. Among these enzymes, membrane-type MMP (MT-MMP) are integral membrane protease that degrade extracellular matrix (ECM) on the cell surface, and play a major role in the activation of progelatinase A (MMP-2). Degradation of the ECM at the periphery of cells regulate cell growth, apoptosis, morphology, migration and invasion in the tissue. MMP17 (MT-MMP4) mRNA size is 2.7-kb. A minor 7.5-kb has been described. The minor one failed to express protein, while the major transcript with an extended open reading frame and expressed 67 and 71 kDa translation products. MMP17 Protein is a 518-amino acids polypeptide, which has the least degree of sequence identity to the other family membranes. The human MMP17 cDNA was found to lack the signal sequence and part of the pro-domain. Northern blot showed MMP17 to be localized in brain, colon, ovary, and testis. High level of mRNA was found in leukocyte, which suggested a possible novel function for MMP17. The distribution of MMP17 mRNA in a variety of cell line has shown MMP17 to be expressed in many transformed and non transform cell type.

Antigen

The polyclonal antibody was raised by immunizing rabbit with a synthetic peptide located within the putative zinc-dependent metallopeptidases domain of mouse MMP-17.

Application

The antibody specificity was assayed by ELISA with the synthetic MMP-17 peptide. The antibody titer is more than 100K for ELISA. It has not been tested in the other applications. However, for the first testing, we recommend 1/500 dilution for ELISA, 1/5000 dilution for Western blot analysis (WB) of recombinant protein, 1/2000 dilution for tissue extracts or cell lysates, 1/100 dilution for immunohistochemistry (IHC) staining on frozen cryosections, 1/50 dilution for IHC staining on paraffin embedded sections.

Related Products

1. Anti-MMP2 pAb (GB-10342)
2. Anti-MMP1 pAb (PY-10174).
3. Anti-MMP12(a.a.35-117) pAb (PY-10169).

Ab dilution	Pre-bleed	Anti-serum
1:1K	0.075	1.044
1:10K	0.074	0.565
1:100K	0.069	0.308
1:1,000K	0.060	0.090
Titer		~697.7K

ELISA Protocol

Antigen is coated on EIA strips at 1µg per well. Add 200µl of blocking buffer and then wash wells with PBST buffer. Antiserum of GB-10042 is diluted from 1K to 1000K and added in separate wells. Incubate at RT for 1hr. Wash unbound antibodies and add HRP conjugated anti-rabbit IgG. Incubate at RT for 1 hr. Wash the plates and add substrate to develop color for 5 min. Read absorbance (ABS) at 650 nm. Antibody titer is defined as >0.1 of ABS of antiserum minus prebleed serum.

Storage

It is supplied as lyophilized serum. Redissolve the lyophilized powder with 250 microliter sterile water will restore the original condition. Store at 4°C for short term application. For long-term storage, aliquot and store at -20°C.

References

1. Puente XS, Pendas AM, Llano E, Velasco G, Lopez-Otin C. Molecular cloning of a novel membrane-type matrix metalloproteinase from a human breast carcinoma. Cancer Res. 1996 Mar 1;56(5):944-9.
2. Pei D. Identification and characterization of the fifth membrane-type matrix metalloproteinase MT5-MMP. J Biol Chem. 1999 Mar 26;274(13):8925-32.
3. Grant GM, Giambernardi TA, Grant AM, Klebe RJ. Overview of expression of matrix metalloproteinases (MMP-17, MMP-18, and MMP-20) in cultured human cells. Matrix Biol. 1999 Apr;18(2):145-8.