Revision 5

#73959 Store at -20°C

Matrix Remodeling Antibody Sampler Kit

1 Kit (8 x 20 microliters)

Cell Signaling TECHNOLOGY®

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Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
MMP-9 (D6O3H) XP® Rabbit mAb	13667	20 µl	84, 92 kDa	Rabbit IgG
MMP-2 (D2O4T) Rabbit mAb	87809	20 µl	64,72 kDa	Rabbit IgG
MMP-3 (D7F5B) Rabbit mAb	14351	20 µl	60 kDa	Rabbit IgG
TIMP1 (D10E6) Rabbit mAb	8946	20 µl	26 kDa	Rabbit IgG
TIMP2 (D18B7) Rabbit mAb	5738	20 µl	22 kDa	Rabbit IgG
TIMP3 (D74B10) Rabbit mAb	5673	20 µl	20, 25 kDa	Rabbit IgG
MMP-7 Antibody	71031	20 µl	28 kDa	Rabbit
MT1-MMP (E3S5S) Rabbit mAb	26424	20 µl	62 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Matrix Remodeling Antibody Sampler Kit provides an economical means of detecting different MMPs and TIMPs using the specific corresponding antibodies. The kit contains enough antibody to perform at least two western blot experiments with each primary antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Background

Matrix remodeling is mainly controlled by MMPs and TIMPs. The matrix metalloproteinase (MMP) family of proteases are a group of zinc-dependent enzymes that target extracellular proteins, including growth factors, cell surface receptors, adhesion molecules, matrix structural proteins, and other proteases (1, 2). Among the family members, MMP-2, MMP-3, MMP-7, MMP-9, and MMP14 (MT1-MMP) have been characterized as important factors for normal tissue remodeling during embryonic development, wound healing, tumor invasion, angiogenesis, carcinogenesis, and apoptosis (3). MMP activity is regulated by mechanisms of both transcriptional control and post translational protein processing. Once synthesized, MMPs exist as latent proenzymes. Maximum MMP activity requires proteolytic cleavage to generate active MMPs by releasing the inhibitory propeptide domain from the full-length protein (4). MMP activity can be inhibited through its binding to endogenously expressed TIMPs. TIMPs are members of the family of tissue inhibitors of matrix metalloproteinases that include TIMP1, TIMP2, TIMP3, and TIMP4. The main function of TIMPs is their inhibitory effect on MMPs. TIMPs irreversibly inactivate MMPs by direct binding MMPs and chelating their zinc cofactor at the catalytic site to inhibit the proteinase function (5,6).

Background References

1. Kessenbrock, K. et al. (2010) *Cell* 141, 52-67.
2. McCawley, L.J. and Matrisian, L.M. (2001) *Curr Opin Cell Biol* 13, 534-40.
3. Page-McCaw, A. et al. (2007) *Nat Rev Mol Cell Biol* 8, 221-33.
4. Hadler-Olsen, E. et al. (2011) *FEBS J* 278, 28-45.
5. Nagase, H. et al. (2006) *Cardiovasc Res* 69, 562-73.
6. Visse, R. and Nagase, H. (2003) *Circ Res* 92, 827-39.

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Limited Uses

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