DATA SHEET

MMP-2 (72kDa Collagenase IV) Ab-2 (Clone VB3)

Mouse Monoclonal Antibody

Cat. #DLN-10992, -10993, or -10991 (0.1ml, 0.5ml, or 1.0ml at 200µg/ml) (Purified Ab with BSA and Azide)
Cat. #DLN-10994 or -10995 (0.1ml or 0.2ml at 1.0mg/ml) (Purified Ab without BSA and Azide)
Cat. #DLN-10989, -10990, or -10988 (0.1ml, 0.5ml, or 1.0ml at 200µg/ml) (Biotin-labeled Ab with BSA and Azide)

Description: MMPs are proteolytic enzymes capable of degrading connective tissue components. They have a common mode of activation, a conserved amino acid sequence in the putative metal binding-active site region, and are inhibited by specific tissue inhibitors of metalloproteinases (TIMPs). MMPs and TIMPs play a significant role in regulating angiogenesis. MMP-2; also known as 72kDa collagenase IV or gelatinase A is synthesized as a 631 amino acid proenzyme which is activated by cleavage of the first 80 amino acids.

Comments: Ab-2 recognizes pro and active forms of MMP-2.

Mol. Wt. of Antigen: 72kDa (pro form) and ~66kDa (active form)

Epitope: Not determined

Species Reactivity: Human. Others-not known.

Clone Designation: VB3

Ig Isotype / Light Chain: IgG_1 / κ

Immunogen: Human native 72kDa MMP-2.

Applications and Suggested Dilutions:

- Immunofluorescence
- Immunohistology (Not Suitable)
- Immunoprecipitation (Native verified)
  (Use Protein G) (Ab 2µg/mg protein lysate)
- Western Blotting (Ab 1-2µg/ml for 2 hrs at RT)

The optimal dilution for a specific application should be determined by the investigator.

Positive Control: Conditioned, serum-free medium from (TPA-treated) HFL-1 cells.

Cellular Localization: Cytoplasmic

Supplied As:

200µg/ml of antibody purified from ascites fluid by Protein G chromatography. Prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide. Also available without BSA and azide at 1mg/ml.

Storage and Stability:

Ab with sodium azide is stable for 24 months when stored at 2-8°C. Antibody WITHOUT sodium azide is stable for 36 months when stored at below 0°C.

dianova GmbH
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Key References:

1. Pickett KL *et. al*., Journal of Dental Research (in press).

Limitations and Warranty:

Our products are intended FOR RESEARCH USE ONLY and are not approved for clinical diagnosis, drug use or therapeutic procedures. No products are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our data sheets and website. Our warranty is limited to the actual price paid for the product. Dianova is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

Material Safety Data:

This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbing systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in a large volume of running water to avoid deposits forming in metal drainage pipes.

For Research Use Only

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Suggested References:

1. Nutt JE, Mellon JK, Qureshi K, Lunec J: Matrix metalloproteinase-1 is induced by epidermal growth factor in human bladder tumour cell lines and is detectable in urine of patients with bladder tumours. Br J Cancer 1998 Jul;78(2):215-220.

2. Gohlke U, Gomis-Ruth FX, Crabbe T, Murphy G, Docherty AJ, Bode W: The C-terminal (haemopexin-like) domain structure of human gelatinase A (MMP2): structural implications for its function. FEBS Lett 1996 Jan 8;378(2):126-130.

3. Giannelli G, Falk-Marzillier J, Schiraldi O, Stetler-Stevenson WG, Quaranta V: Induction of cell migration by matrix metalloprotease-2 cleavage of laminin-5. Science 1997 Jul 11;277(5323):225-228.

4. Kawamata H, Uchida D, Hamano H, Kimura-Yanagawa T, Nakashiro KI, Hino S, Omotehara F, Yoshida H, Sato M: Active-MMP2 in cancer cell nests of oral cancer patients: correlation with lymph node metastasis. Int J Oncol 1998 Oct;13(4):699-704.

5. Kopf-Maier P, Flug M: Behavior of the basement membrane during carcinoma cell invasion in chemically induced carcinomas of the skin. Acta Anat (Basel) 1996;155(1):1-13.

6. Theret N, Musso O, Campion JP, Turlin B, Loreal O, L'Helgoualc'h A, Clement B: Overexpression of matrix metalloproteinase-2 and tissue inhibitor of matrix metalloproteinase-2 in liver from patients with gastrointestinal adenocarcinoma and no detectable metastasis. Int J Cancer 1997 Aug 22;74(4):426-432.

7. Musso O, Theret N, Campion JP, Turlin B, Milani S, Grappone C, Clement B: In situ detection of matrix metalloproteinase-2 (MMP2) and the metalloproteinase inhibitor TIMP2 transcripts in human primary hepatocellular carcinoma and in liver metastasis. J Hepatol 1997 Mar;26(3):593-605.

8. Mori M, Mimori K, Shiraishi T, Fujie T, Baba K, Kusumoto H, Haraguchi M, Ueo H, Akiyoshi T: Analysis of MT1-MMP and MMP2 expression in human gastric cancers. Int J Cancer 1997 Jun 20;74(3):316-321.

9. Li H, Fang W, Shi Z: Effects of TIMP-2 gene transfection on biological behaviors of a metastatic human lung carcinoma cell line. Chung Hua I Hsueh Tsa Chih 1997 Sep;77(9):652-656.

10. Jackson CJ, Arkell J, Nguyen M: Rheumatoid synovial endothelial cells secrete decreased levels of tissue inhibitor of MMP (TIMP1). Ann Rheum Dis 1998 Mar;57(3):158-161.

11. Piedagnel R, Murphy G, Ronco PM, Lelongt B: Matrix metalloproteinase 2 (MMP2) and MMP9 are produced by kidney collecting duct principal cells but are differentially regulated by SV40 large-T, arginine vasopressin, and epidermal growth factor. J Biol Chem 1999 Jan 15;274(3):1614-1620.

12. Repassy G, Forster-Horvath C, Juhasz A, Adany R, Tamassy A, Timar J: Expression of invasion markers CD44v6/v3, NM23 and MMP2 in laryngeal and hypopharyngeal carcinoma. Pathol Oncol Res 1998;4(1):14-21.

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