

MILLIPLEX(R) Human MMP Magnetic Bead Panel 2 - Immunology Multiplex Assay Matrix Metalloproteinase Bead-Based Multiplex Assays using the Luminex technology enable the simultaneous analysis of multiple MMPs biomarkers in human serum, plasma and cell culture samples.

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Unit EA

Description

MMPs (matrix metalloproteinases), a family of zinc proteases responsible for the breakdown of extracellular matrix (ECM), play a key role in normal physiological processes, such as embryonic development and tissue morphogenesis, tissue and bone remodeling, wound healing, and angiogenesis. These processes rely on MMPs' role in the cleavage of cell surface receptors, the release of apoptotic ligands, cell proliferation and differentiation, and chemokine activity modulation. Similar in structure, MMPs are synthesized and secreted as inactive pro-enzymes that require proteolytic cleavage for activation. This process can be mediated by serine proteases or other MMPs. An increase in MMP expression occurs in response to a wide range of stimuli, including adhesion molecules, growth factors, cytokines, and hormones. Regulation of MMP activity is controlled primarily by TIMPs (tissue inhibitors of metalloproteinases). Therefore, disruption of the MMP/TIMP balance can result in arthritis, cardiovascular disease and tumor growth and metastasis. MMP/TIMP research plays a significant role in achieving a deeper understanding of disease states such as chronic inflammation, cardiovascular disease, and cancer. The MILLIPLEX(R) Human MMP Bead Panel 2 (MMP-1, -2, -7, -9, -10) will enable you to explore the modulation of and the function of MMP expression in multiple therapeutic areas. The Luminex(R) xMAP(R) platform uses a magnetic bead immunoassay format for ideal speed and sensitivity to quantitate multiple analytes simultaneously, dramatically improving productivity while conserving valuable sample volume. Panel Type: Cytokines/Chemokines