HB220419

Recombinant Human Macrophage Migration Inhibitory Factor (Human MIF)

Product Information

Product Name	Cat#	Size
Recombinant Human Macrophage Migration Inhibitory Factor (Human MIF)	92508ES10	10 μg
	92508ES60	100 μg
	92508ES76	500 μg

Product Description

Migration Inhibitory Factor (MIF) is a secreted protein without a cleavable signal sequence and is secreted via a specialized, non-classical pathway. It is secreted by macrophages upon stimulation by bacterial lipopolysaccharide (LPS), or by M.tuberculosis antigens. MIF consists of two α-helices and six β-strands, four of which form a β-sheet. The two remaining β-strands interact with other MIF molecules, creating a trimer. Structure-function studies suggest MIF is bifunctional with segregated topology. The N- and C-termini mediate enzyme activity (in theory). Phenylpyruvate tautomerase activity (enol-to-keto) has been demonstrated and is dependent upon Pro at position 1. Amino acids 50-65(a.a.) have also been suggested to contain thiol-protein oxidoreductase activity. MIF has proinflammatory cytokine activity centered around (a.a.) 49 - 65. On fibroblasts, MIF induces, IL-1, IL-8 and MMP expression; on macrophages, MIF stimulates NO production and TNF-α release folllowing IFN-γ activation. MIF apparently acts through CD74 and CD44, likely in some form of trimeric interaction. Human MIF is active on mouse cells. Human MIF is 90 %, 94 %, 95 %, and 90 % aa identical to mouse, bovine, porcine and rat MIF, respectively.

Product Properties

Synonyms	GIF Protein, Human; GLIF Protein, Human; MMIF Protein, Human
Accession	P14174
GeneID	4282
Source	E.coli-derived Human Macrophage Migration Inhibitory Factor protein, Met-Ala115
Molecular Weight	Approximately 12.5 kDa.
AA Sequence	MPMFIVNTNVPRASVPDGFLSELTQQLAQATGKPPQYIAVHVVPDQLMAFGGSSEPCALCSLHSI GKIGGAQNRSYSKLLCGLLAERLRISPDRVYINYYDMNAANVGWNNSTFA
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The specific activity is determined by binding rhCD74 in a functional ELISA.
Endotoxin	< 1.0 EU per 1μg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20℃ to -80℃ for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!