

Recombinant Rat Migration Inhibitor Factor

#R00582

Size: 10 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Macrophage migration inhibitory factor (MIF or MMIF), also named as glycosylation-inhibiting factor (GIF), L-dopachrome isomerase, or phenylpyruvate tautomerase, is a protein encoded by the MIF gene. It is released from white blood cells by bacterial antigen stimulation to trigger an acute immune response, or by glucocorticoids to counter-act the inhibitory effects of glucocorticoids on immune system. MIF is a homotrimer of which each subunit contains 115 amino acids. As mentioned above, MIF is involved in the innate immune response to bacterial pathogens and counter-acts the anti-inflammatory activity of glucocorticoids. Furthermore, it also plays a role as mediator in regulating the function of macrophages in host defense and has phenylpyruvate tautomerase and dopachrome tautomerase activity in vitro. Rat MIF is 99 %, 90 %, 89 %, and 89 % a.a. identical to human, murine, porcine and bovine, respectively.

AA Sequence

MPMFIVNTNVPRASVPEGFLSELTQQLAQATGKPAQ
YIAVHVVPDQLMTFSGTSDPCALCSLHSGKIGGAQN
RNYSKLLCGLLSDRLHISPDRVYINYYDMNAANVGW
NGSTFA

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.

Product Specification

Synonyms	MIF, Glutathione-binding 13 kDa Protein, L-dopachrome Isomerase, L-dopachrome Tautomerase, Phenylpyruvate Tautomerase
Accession	P30904
GeneID	81683
Species	Rat
Source	Escherichia coli.
Molecular Weight	Approximately 12.5 kDa, a single non-glycosylated polypeptide chain containing 115 amino acids.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
Biological Activity	Test in process.
Physical	Sterile Filtered White Lyophilized

Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM Tris, pH 8.0, 150 mM NaCl, 3 % trehalose.
Endotoxin	Less than 1 EU/µg of rRtMIF as determined by LAL method.