

Recombinant Rat Migration Inhibitor Factor

Information

Gene ID	81683
Accession #	P30904
Alternate Names	MIF, Glutathione-binding 13 kDa Protein, L-dopachrome Isomerase, L-dopachrome Tautomerase, Phenylpyruvate Tautomerase
Source	Escherichia coli.
M.Wt	Approximately 12.5 kDa, a single non-glycosylated polypeptide chain containing 115 amino acids.
AA Sequence	MPMFIVNTNV PRASVPEGFL SELTQQLAQA TGKPAQYIAV HVVPDQLMTF SGTSDPALCALC SLHSIGKIGG AQNRNYSKLL CGLLSDRLHI SPDRVYINYY DMNAANVGWN GSTFA
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM Tris, pH 8.0, 150 mM NaCl, 3 % trehalose.
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.
Biological Activity	Test in process.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10µg	100µg	500µg
Recombinant Rat Migration Inhibitor Factor	10µg	100µg	500µg

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

Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rRtMIF as determined by LAL method.

Description

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.

Reference

1. WY Weiser, PA Temple, JS Witek-Giannotti, et al. 1989. Proc Natl Acad Sci U S A, 86: 7522-6
2. CA Kozak, MC Adamson, CE Buckler, et al. 1995. Genomics, 27: 405-11
3. DF Larson and K Horak. 2006. Crit Care, 10: 138
4. HW Sun, J Bernhagen, R Bucala, et al. 1996. Proc Natl Acad Sci U S A, 93: 5191-6
5. M Oddo, T Calandra, R Bucala, et al. 2005. Infect Immun, 73: 3783-6
6. M Emonts, FC Sweep, N Grebenchtchikov, et al. 2007. Clin Infect Dis, 44: 1321-8.

APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com