



Genorise[®] Recombinant Ovine IL-10

Catalog Number: GR104080

Background

IL-10, also known as human cytokine synthesis inhibitory factor (CSIF), is an anti-inflammatory cytokine that is produced by T cells, NK cells, mast cells and macrophages (1,2,3). It is capable of inhibiting synthesis of pro-inflammatory cytokines like IFN- γ , IL-2, IL-3, TNF α and GM-CSF made by cells such as macrophages and regulatory T-cells. IL-10 also displays potent abilities to suppress the antigen presentation capacity of antigen presenting cells. IL-10 initiates signal transduction by binding to a cell surface receptor complex consisting of IL-10 RI and IL-10 RII (1). Binding of IL-10 leads to the activation of Jak1 and Tyk2, which phosphorylates Stat-3 (1,4). The anti-inflammatory activity of IL-10 is due to its ability to block signaling through other cytokine receptors, notably IFN γ receptor, by upregulating expression of SOCS-1 (1,4). In addition, IL-10 promotes T cell tolerance by inhibiting tyrosine phosphorylation of CD28 (5,6). IL-10 is an important negative regulator of the immune response, which allows for maintenance of pregnancy (1). In contrast, increased IL-10 levels contribute to persistent *Leishmania major* infections (7).

References

1. Pestka, S. et al. (2004) *Immunol Rev* 202, 8-32.
2. Akuffo, H. et al. (1999) *Clin Exp Immunol* 117, 529-34.
3. Grimbaldston MA, et al (2007). *Nat. Immunol.* 8 (10): 1095–104.
4. O'Shea, J.J. and Murray, P.J. (2008) *Immunity* 28, 477-87.
5. Akdis, C.A. and Blaser, K. (2001) *Immunology* 103, 131-6.
6. Akdis, C.A. et al. (2000) *FASEB J* 14, 1666-8.
7. Von Stebut, E. (2000) *Eur J Dermatol* 17, 115-22.

Related products

1. GR238016 50 ml Reagent Reservoir, 100/case, 5 packs/case (pack of 20)
2. GR238004 Tissue Culture 96-well Microplate, individually packed, Case of 50
3. GR238019 1.5 ml Microcentrifuge tube with screw cap and free-standing, pack of 500
4. GR238007 125 ml leak-resistant HDPE bottle, colorless, pack of 24
5. GR238002 Microplate 12x8-Well Strip High Binding, Case of 50
6. GR238003 Microplate 12x8-Well Strip Medium Binding, Case of 50
7. GR238032 42592 Costar Stripwell Microplate 1 x 8 Flat Bottom, High Binding, Case of 100
8. GR238001 468667 Thermo Microplate 12x8-Well Strip Nunc Maxisorp F8, Case of 60
9. GR238031 96-well microplate sealer plastic, pack of 100



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Description

Size: 5 µg

Source: *E. coli*- derived

Compositions: Ser19-Met177

Accession #: NP_001009327.1

N-terminal Sequence Analysis: Ser19

Predicted Molecular Mass: 18 kDa (monomer)

Specifications

Activity: Measured in a cell proliferation assay using MC/9-2 mouse mast cells. Thompson-Snipes, L. et al. (1991) J. Exp. Med. 173:507. The ED50 for this effect is typically 1.5-4.5 ng/mL.

Endotoxin Level: < 1.0 EU per 1 µg of the protein by the LAL method.

Purity: > 97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS containing BSA.

Preparation and Storage

Reconstitution: Reconstitute at 50 µg/mL in sterile PBS.

Shipping: The product is shipped at 4°C with ice pad. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage: Use a manual defrost freezer and avoid repeated freeze thaw cycles.

- 6 months from date of receipt, -20 to -70°C as supplied.
- 3 months, -20 to -70°C under sterile conditions after reconstitution.

DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.

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NOT FOR USE IN HUMANS AND ANIMALS**