

Recombinant Human Growth/Differentiation Factor 15 / Macrophage Inhibitory Cytokine 1 (rHuGDF-15/MIC-1)

PrimeGene Technical Data Sheet

Catalog Number:	108-25E
Source:	<i>E. coli</i>
Molecular Weight:	Predicted molecular mass of approximately 12 kDa in SDS-PAGE under reducing condition.
Quantity:	10ug/100μg
AA Sequence:	Ala197-Ile308; Accession # Q99988
Purity:	> 95 % by SDS-PAGE analyses.
Biological Activity:	Measured by its binding ability in a functional ELISA. When rHuGDF-15/MIC-1 is used at 0.5 μg/mL, the concentration of Recombinant Human Activin RIB/ALK-4 Fc Chimera that produces 50% of the optimal binding response is approximately 0.5-3 μg/mL.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from 0.2 μm filtered concentrated solution in 4 mM HCl.
Endotoxin:	Less than 0.1 EU/μg of rHuGDF-15/MIC-1 as determined by LAL method.
Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile 4 mM HCl to a concentration of 0.5 mg/mL. Further dilutions should be made in appropriately buffered solutions.
Stability & Storage:	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● 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.
Usage:	This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.

Human Growth/Differentiation Factor 15 / Macrophage Inhibitory Cytokine 1

Growth Differentiation Factor 15 (GDF-15), also called Macrophage Inhibitory Cytokine 1 (MIC-1), Placental Transforming Growth Factor beta, Prostate-derived Factor, and Placental Bone Morphogenetic Protein, is a divergent member of the TGF-beta superfamily. Human GDF-15 shares 66% and 68% amino acid sequence identity with the rat and mouse proteins, respectively. GDF-15 is highly expressed in placenta and brain, and it is expressed at lower levels in kidney, pancreas, prostate, and colon. Similar to other TGF-beta family proteins, the GDF-15 proprotein is cleaved at a dibasic cleavage site (RxxR) to release the mature protein. The C-terminal domain of GDF-15 contains seven characteristic conserved cysteine residues necessary for the formation of the cysteine knot and the single interchain disulfide bond. Biologically active GDF-15 is a disulfide-linked homodimer of the mature protein and signals through the heterodimeric receptor composed of TGF-beta RI/ALK-5 and TGF-beta RII. GDF-15 has been shown to have various functions, including inhibition of TNF-alpha production from lipopolysaccharide-stimulated macrophages and the induction of cartilage formation.