Active Recombinant Mouse Gdf15 protein

Cat. No. Gdf15-393M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Gdf15(Ser189-Ala303) was expressed in E. coli.
Species	Mouse
Source	E.coli
ProteinLength	Ser189-Ala303
Description	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. Cellular responses to TGF-beta proteins are mediated by hetero-oligomeric complexes of type I and type II serine/threonine kinase receptors. 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, GDF-15 is synthesized as a large precursor protein that is cleaved at a dibasic cleavage site (RxxR) to release the mature protein. Mature mouse GDF-15 shares 66% and 97% amino acid sequence identity with the human and rat proteins, respectively. The C-terminal domain of GDF-15 contains seven characteristic conserved cysteine residues necessary for the formation of the cysteine knot and the single inter-chain disulfide bond. Biologically active GDF-15 is a disulfide-linked homodimer of the mature protein. 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. GDF-15 also promotes

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	neuronal survival, and hypothalamic expression of GDF-15 causes appetite suppression via modulation of neuropeptide Y and pro-opiomelanocortin levels. GDF-15 is cardioprotective via inhibition of platelet activation, limiting atherosclerosis, promoting recovery following myocardial infarction, and regulating angiogenesis. Exposure of cardiomyocytes to GDF-15 results in Smad2 and Smad3 phosphorylation.
Predicted N Terminal	Ser189
Form	Lyophilized from a 0.2 μm filtered solution in HCl.
Bio-activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse GSF-15 is immobilized at 2 μg/mL (100 μl/well), the concentration of Recombinant Mouse Activin RIB/ALK-4 Fc Chimera that produces 50% of the optimal binding response is approximately 1-6 μg/mL.
Molecular Mass	Predicted Molecular Mass: 13 kDa; SDS-PAGE: 9-13 kDa, reducing conditions.
Endotoxin	<0.10 EU per 1 μg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 250 μg/mL in 4 mM HCl.

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Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

GENE INFORMATION

Gene Name	Gdf15 growth differentiation factor 15 [Mus musculus]
Official Symbol	Gdf15
Synonyms	GDF15; growth differentiation factor 15; growth/differentiation factor 15; GDF-15; macrophage inhibiting cytokine-1; SBF; MIC-1; NAG-1;
Gene ID	23886
mRNA Refseq	NM_011819
Protein Refseq	NP_035949
UniProt ID	Q9Z0J7
Chromosome Location	8; 8 B3.3
Function	growth factor activity;

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