

Active Recombinant Human Growth Differentiation Factor 1

Cat. No. GDF1-717H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human GDF1 protein was expressed in CHO. Asp254-Arg372.
Species	Human
Source	CHO
Protein Length	254-372 a.a.
Description	GDF1 is a 12-15 kDa secreted protein in the TGFβ superfamily. It is the functional equivalent of frog, zebrafish, and chick Vg1. Human GDF1 is synthesized as a preproprotein that contains a 29 amino acid (aa) signal peptide, a 224 aa propeptide, and a 119 aa mature peptide which is released following proteolysis at a dibasic cleavage site. Mature human GDF1 shares 81% aa sequence identity with mouse and rat GDF1. GDF1 is expressed in the developing and adult nervous system, particularly in neurons of the cerebral cortex and hippocampus.
Form	Lyophilized from a 0.2 μm filtered solution in HCl with BSA as a carrier protein.
N-terminal Sequence	Asp254
Molecular Weight	12.6 kDa
Activity	Measured by its ability to induce Smad2 phosphorylation in P19 mouse embryonal carcinoma cells. Mazerbourg, S. et al. (2004) Mol. Endocrinol. 18:653. 50ng/mL of Recombinant Human GDF1 can effectively induce Smad2

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	phosphorylation.
Endotoxin Level	<1.0 EU per 1 µg of the protein by the LAL method.
SDS-PAGE	13 kDa, reducing conditions.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Reconstitution	100 µg/mL in 4 mM HCl that containing at least 0.1% human or bovine serum albumin.
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.

GENE INFORMATION

Gene Name	GDF1 growth differentiation factor 1 [Homo sapiens]
Official Symbol	GDF1
Synonyms	GDF1; growth differentiation factor 1; DORV; DTGA3; embryonic growth/differentiation factor 1; GDF-1
Gene ID	2657
mRNA Refseq	NM_001492
Protein Refseq	NP_001483
MIM	602880

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UniProt ID	P27539
Chromosome Location	19p13.11
Pathway	Developmental Biology; Signaling by NODAL
Function	cytokine activity; growth factor activity

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