

Growth/differentiation factor 5

Catalog No: #AP78554



Package Size: #AP78554-1 50ug #AP78554-2 100ug #AP78554-3 1mg

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Description

Product Name	Growth/differentiation factor 5
Brief Description	Recombinant Protein
Host Species	E.coli
Purification	Greater than 90% by SDS-PAGE
Species Reactivity	Human
Immunogen Description	28-381AA
Other Names	BMP14,CDMP1,Bone morphogenetic protein 14, Cartilage-derived morphogenetic protein 1,Lipopolysaccharide-associated protein 4,Radotermin,BMP-14,CDMP-1,LAP-4
Accession No.	P43026Gene name:GDF5
Uniprot	P43026
GeneID	8200;
Calculated MW	38.94
Tag Info	His
Formulation	50mM NaH ₂ PO ₄ , 500mM NaCl Buffer with 500mM Imidazole,10%glycerol(PH8.0)
Storage	Store at -20C. (Avoid repeated freezing and thawing.)Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Background

Growth factor involved in bone and cartilage formation. During cartilage development regulates differentiation of chondrogenic tissue through two pathways. Firstly, positively regulates differentiation of chondrogenic tissue through its binding of high affinity with BMPR1B and of less affinity with BMPR1A, leading to induction of SMAD1-SMAD5-SMAD8 complex phosphorylation and then SMAD protein signaling transduction (PubMed:24098149, PubMed:21976273, PubMed:15530414, PubMed:25092592). Secondly, negatively regulates chondrogenic differentiation through its interaction with NOG (PubMed:21976273). Required to prevent excessive muscle loss upon denervation. This function requires SMAD4 and is mediated by phosphorylated SMAD1/5/8 (By similarity). Binds bacterial lipopolysaccharide (LPS) and mediates LPS-induced inflammatory response, including TNF secretion by monocytes (PubMed:11276205).

References

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Note: This product is for in vitro research use only