

Datasheet for 009-001-U94-1000
rHuman GDF-5 Protein**Overview**

Description:	Human Growth and Differentiation Factor-5 Recombinant Protein - 009-001-U94-1000
Item No.:	009-001-U94-1000
Size:	1 mg
Applications:	SDS-PAGE, Cellular Assay
Origin:	Human
Expressed in:	E. coli

Product Details

Background:	Growth/Differentiation Factor 5 (GDF-5) is a growth factor that regulates cell proliferation and differentiation in embryonic and adult tissues. GDF-5 is part of the TGF family of proteins and is closely related to the BMP family of proteins. Recombinant human GDF-5 is a non-glycosylated homodimer, containing two 120 amino acids chains, with a total molecular weight of 27.4 kDa. To enable bacterial expression the N-terminal sequence of Ala-Pro-Leu-Thr was replaced with a Lys.
Synonyms:	Cartilage-derived morphogenetic protein 1
Species of Origin:	Human
Expressed in:	E. coli
Type:	Recombinant Protein
Low Endotoxin:	Yes

Target Details

Gene Name:	GDF5
Purity/Specificity:	Growth and Differentiation Factor-5 purity was determined to be greater than 98% as determined by analysis by HPLC, UV-Spectroscopy at 280nm and by reducing and non-reducing SDS-pAGE.
Relevant Links:	<ul style="list-style-type: none">• UniProtKB - P43026

Application Details

Tested Applications:	SDS-PAGE
Suggested Applications:	Cellular Assay (Based on references)
Application Note:	Growth and Differentiation Factor-5 Recombinant Protein has been tested by SDS-PAGE and biological activity and is suitable as a control for polyclonal or monoclonal anti-Growth and Differentiation Factor-5 in immunological assays.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
Other:	Endotoxin Level: Measured by kinetic LAL analysis and is typically ≤ 1 EU/ μ g protein. Biologic Activity: The activity is determined by the ability to induce alkaline phosphatase activity in ATDC5 cells is typically 0.1-1 μ g/mL.

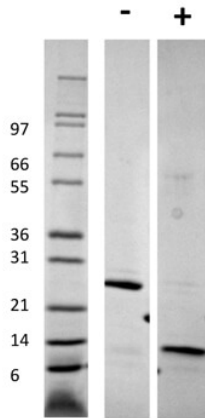
Formulation

Physical State:	Lyophilized
Buffer:	0.1% Trifluoroacetic acid
Preservative:	None
Stabilizer:	None
Reconstitution Volume:	1.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

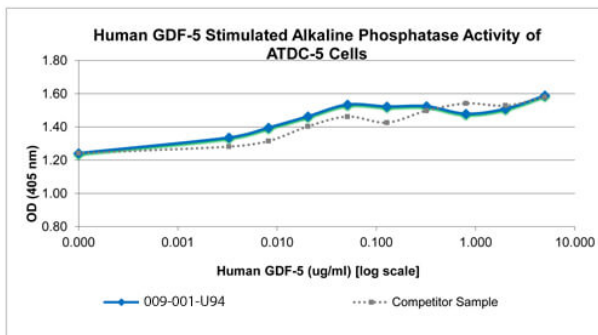
Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL). For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature.
Expiration:	Expiration date is six (6) months from date of receipt.

Images



SDS-PAGE

SDS-PAGE of Human Growth and Differentiation Factor-5 Recombinant Protein. Lane 1: Molecular weight marker. Lane 2: 1 µg Human GDF-5 in non-reducing conditions (-). Lane 3: 1 µg Human GDF-5 in reducing conditions (+). Human GDF-5 is predicted to be a homodimer with a total MW of 26.8 kDa.



SDS-PAGE

Bioactivity of Human Growth and Differentiation Factor-5 Recombinant Protein. Serial dilutions of Human GDF-5, starting at 5 ug/mL, were added to ATDC-5 cells growing in the presence of 4 ug/mL heparin. Alkaline phosphate activity was measure after 67 hours and the linear portion of the curve was us used to calculate the ED50. The ED50 of Human GDF-5 is 0.01 ug/mL. This value is comparable to the typical expected range of <1 ng/mL.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.