

TECHNICAL DATA SHEET

Recombinant Human GDF-3 (Carrier-free)

Catalog Number: 21-7059

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human GDF-3 (Carrier-free)

DESCRIPTION

GDF-3 is a member of the BMP family of TGF-beta superfamily proteins, and is highly homologous to GDF-9. The GDF (Growth/Differentiation Factor) group of proteins is characterized by a polybasic proteolytic processing site which is cleaved to produce a mature protein. With the exception of GDF-3 and -9, GDF dimers are disulfide-linked proteins. GDF-3 is a secreted protein and is expressed in undifferentiated embryonic stem (ES) cells, ossifying bone, brain, bone marrow, spleen, thymus, and adipose tissue. This protein displays inhibitory activity towards other TGF-beta superfamily members including BMPs, and participates in regulatory functions in embryogenesis. GDF-3 has been shown to be induced by a high fat diet, and is associated with adipogenesis and obesity.

MOLECULAR MASS

Recombinant human GDF-3 is a 26.0 kDa non-disulfide-linked homodimer containing two 114 amino acid polypeptide chains.

AMINO ACID SEQUENCE

AAIPVPKLSC KNLCHRHQLF INFRDLGW HK WIIAPKGFMA NYCHGEC PFS LTISLNSSNY AFMQALMHAV DPEIPQAVCI PTKLSPISML YQDNNDNVIL RHYEDMVVDE CGCG

SOURCE

E. coli

APPLICATIONS

Bioassay

PURITY

98 %

STORAGE

-20°C

PROTEIN CONTENT

Content Verified by UV Spectroscopy and/or SDS-PAGE

ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/μg of protein (<1 EU/μg).

AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

CROSS REACTIVITY

Mouse

BIOACTIVITY

Determined by its ability to inhibit induced alkaline phosphatase production by ATDC-5 chondrogenic cells. The ED₅₀ for this effect is 100-150 ng/ml.

RESEARCH AREAS

Diabetes / Weight Regulation; Stem Cells & Differentiation; TGF-beta Superfamily

RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

REFERENCES

Levine AJ and Brivanlou AH. 2006. Cell Cycle 5(10): 1069-73. McPherron AC and Lee SJ. 1993. J Biol Chem. 268(5): 3444-3449. Wang W, Yang Y, Meng Y and Shi Y. 2004. Biochem Biophys Res Comm. 321(4): 1024-31. Andersson O, Korach-Andre M, Reissmann E, Ibanez CF and Bertolino P. 2008. Proc Natl Acad Sci USA 105(20): 7252-7256.

Citations are provided as a resource for additional applications that have not been validated by Tonbo Biosciences. Please choose the appropriate format for each application and consult Materials and Methods sections for additional details about the use of any product in these publications.

For Research Use Only.

Not for use in diagnostic or therapeutic procedures. Not for resale. Not for distribution without written consent. Tonbo Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Tonbo Biosciences, Tonbo Biosciences Logo and all other trademarks are the property of Tonbo Biotechnologies Corporation. © 2013 Tonbo Biosciences.