

TECHNICAL DATA SHEET

Recombinant Human TGF-alpha (Carrier-free)

Catalog Number: 21-8698

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human TGF-alpha (Carrier-free)

DESCRIPTION

Transforming Growth Factor alpha (TGF-alpha) is a member of the EGF subfamily, shares over 40% identity with EGF, and binds to the EGF receptor (EGFR) to stimulate the proliferation of a wide range of epidermal and epithelial cells. TGF-alpha also has angiogenic properties. Binding to the EGFR activates the PI3K and Erk1/2 pathways. It is expressed by keratinocytes, epithelial cells, macrophages and various tumors and tumor cell lines. Overexpression of TGF-alpha has been linked to a variety of cancers including breast, colon, and stomach cancers.

MOLECULAR MASS

Recombinant human TGF-alpha is a 50 amino acid polypeptide (5.5 kDa) which shares approximately 40% sequence homology with EGF, including 6 conserved cysteine residues, which form 3 intramolecular disulfide bonds.

AMINO ACID SEQUENCE

VVSHFNDCPD SHTQFCFHGT CRFLVQEDKP ACVCHSGYVG ARCEHADLLA

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

Chicken, Mouse, Rat

BIOACTIVITY

The ED₅₀ as determined by the dose-dependent stimulation of thymidine uptake by BALB/c 3T3 cells is ≤ 0.2 ng/ml, corresponding to a specific activity of ≥ 5 x 10⁶ units/mg.

RESEARCH AREAS

Angiogenesis/Cardiovascular; Cancer; Inflammation; Wound Healing

RECONSTITUTION

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

REFERENCES

Massagué J. 1990. J Biol Chem. 265(35):21393-21396. Derynck R, Roberts AB, Winkler ME, Chen EY and Goeddel DV. 1984. 38(1): 287-297. Groenen LC, Nice EC and Burgess AW. 1994. Growth Factors. 11(4): 235-257. Lui S, Wierod L, Skarpen E, Grosvik H, Duan and Huitfeldt HS. 2013. Cell Physiol Biochem. 32(3): 511-522. Schreiber AB, Winkler ME and Derynck R. 1986. Science. 232(4755): 1250-1253. Kumar V, Bustin SA and McKay IA. Cell Biol Int. 1995. 19(5): 373-388.

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