

TECHNICAL DATA SHEET

Recombinant Human Angiopoietin-2 (Carrier-free)

Catalog Number: 21-7168

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human Angiopoietin-2 (Carrier-free)

DESCRIPTION

Angiopoietin-2 (ANG-2, ANGPT2) is a secreted glycoprotein belonging to the angiopoietin family of growth factors that play a critical role in the regulation of angiogenesis and vascular development. Like Angiopoietin-1, Angiopoietin-2 is a ligand for receptor tyrosine kinase Tie-2, binding with similar affinity. Angiopoietin-2 plays a role in regulating Ang-1/Tie-2 signaling, but can also act as a Tie-2 antagonist depending on its state of multimerization. In the absence of VEGF, Angiopoietin-2 promotes vessel destabilization and regression. On the contrary, in the presence of VEGF, it promotes cell proliferation and migration in endothelial cells.

MOLECULAR MASS

Recombinant Human Angiopoietin-2 is a 50.1 kDa glycoprotein with a C-terminal His-tag. It migrates under reducing conditions at approximately 60-70 kDa by SDS-PAGE. Based on sequencing, the N-terminus starts with residue 68 (D) of the precursor protein.

AMINO ACID SEQUENCE

DAPLEYDDSV QRLQVLENIM ENNTQWLMKL ENYIQDNMCK EMVEIQQNAV QNQTAVMIEI GTNLLNQTAE QTRKLDVEA QVLNQTRTRLE LQLEHSLST
 NKLEKQILDQ TSEINKLQDK NSFLEKKVLA MEDKHIIQLQ SIKEEKDQLQ VLVSKQNSII EEELEKKIVTA TVNNSVLQKQ QHDLMETVNN LLTMMSTNS
 AKDPTVAKEE QISFRDCAEV FKSGHTTNGI YTLTFPNSTE EIKAYCDMEA GGGGWTIIQR REDGSVDFQR TWKEYKVGFG NPSGEYWLGN
 EFVSQLTNQQ RYVLKIHLKD WEGNEAYSly EHFYLSSEEL NYRIHLKGLT GTAGKISSIS QPGNDFSTKD GDNDKCICKC SQMLTGGWWF DACGPSNLNG
 MYYPQRQNTN KFNIGKWWYW KSGYSKAT TMMIRPADFH HHHHH

SOURCE

CHO cells

APPLICATIONS

Bioassay

PURITY

95 %

STORAGE

-20°C

PROTEIN CONTENT

Verified by UV Spectroscopy and/or SDS-PAGE gel.

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

BIOACTIVITY

Using a concentration of 0.2 ug/mL, a tubulogenesis assay with human umbilical vein endothelial cells (HUVECs) is performed.

RESEARCH AREAS

Apoptosis, Angiogenesis & Cardiovascular, Bone and Cartilage

RECONSTITUTION

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

REFERENCES

Masonpierre PC, Suri C, Jones PF, Bartunkova S, Wiegand SJ, Radziejewski C, Compton D, McClain J, Aldrich TH et al. 1997. Science. 277(5322): 55-60.
 Murdoch C, Tazzyman S, Webster S and Lewis CE. 2007. J Immunol. 178(11): 7405-7411. Tsigkos S, Koutsilieris M and Papapetropoulos A. 2003. Expert Opin Investig Drugs. 12(6): 933-941. Sato A, Iwama A, Takakura N, Nishio H, Yancopoulos GD and Suda T. 1998. Int Immunol. 10(8):1217-1227. Singh H, Tahir TA, Alawo DO, Issa E and Brindle NP. 2011. Biochem Soc Trans. 39(6): 1592-1596. Yuan HT, Khankin EV, Karumanchi SA and Parikh SM. 2009. Mol Cell Biol. 29(8): 2011-2022.

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