Aviva Systems Biology Corporation
10211 Pacific Mesa Blvd, Ste 401
San Diego, CA 92121
Tel: 858-552-6979 Fax: 858-552-6975
Email: info@avivasysbio.com
Web: www.avivasysbio.com

CERTIFICATE OF ANALYSIS

Recombinant Human Angiopoietin-2 (Carrier-free)

Catalog Number: OPTA00946

Lot Number: R217168005004

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human Angiopoietin-2 (Carrier-free)

RECONSTITUTION

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C. Avoid repeated freeze-thaw cycles.

Note: The lyophilized protein is deposited as a clear and colorless film that is not always visible. Even if vial appears empty, reconstitute according to instructions above and use as intended.

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.

RESEARCH AREAS

Apoptosis, Angiogensis & Cardiovascular, Bone and Cartidage

PROTEIN CONTENT

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

AUTHENTICITY

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

BIOACTIVITY

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

AMINO ACID SEQUENCE

DAPLEYDDSV QRLQVLENIM ENNTQWLMKL ENYIQDNMKK EMVEIQQNAV QNQTAVMIEI GTNLLNQTAE QTRKLTDVEA QVLNQTTRLE LQLLEHSLST NKLEKQILDQ TSEINKLQDK NSFLEKKVLA MEDKHIIQLQ SIKEEKDQLQ VLVSKQNSII EELEKKIVTA TVNNSVLQKQ QHDLMETVNN LLTMMSTSNS AKDPTVAKEE QISFRDCAEV FKSGHTTNGI YTLTFPNSTE EIKAYCDMEA GGGGWTIIQR REDGSVDFQR TWKEYKVGFG NPSGEYWLGN EFVSQLTNQQ RYVLKIHLKD WEGNEAYSLY EHFYLSSEEL NYRIHLKGLT GTAGKISSIS QPGNDFSTKD GDNDKCICKC SQMLTGGWWF DACGPSNLNG MYYPQRQNTN KFNGIKWYYW KGSGYSLKAT TMMIRPADFH HHHHH

ENDOTOXIN LEVEL

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

APPLICATIONS

Bioassay

SOURCE	PURITY	STORAGE
CHO cells	95 %	-20°C

CROSS REACTIVITY

N/A

REFERENCES

Masonpierre PC, Suri C, Jones PF, Bartunkova S, Wiegand SJ, Radziejeski C, Compton D, McClain J, Aldrich TH et al. 1997. Science. 277(5322): 55-60. Murdoch C, Tazzyman S, Webster S adn 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.

This product lot has passed Aviva Systems Biology's Quality Control (QC) Tests and is certified for Research Use Only.

Aviva Systems Biology Inc. guarantees the performance of this product for one year (12 months) from the date of receipt by the end user, or until the expiration date – whichever occurs first. This guarantee is dependent upon proper storage and handling as instructed on our Technical Data Sheets and Certificates of Analysis. Every lot of product is quality tested.