

TECHNICAL DATA SHEET

Recombinant Human CYR61 (Carrier-free)

Catalog Number: 21-7175

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human CYR61 (Carrier-free)

DESCRIPTION

CYR61, also known as CCN1, is a matricellular signaling molecule that binds to a number of cell surface proteins thereby modulating a variety of signaling pathways. CYR61 is expressed in a variety of cells and is capable of regulating cell adhesion, migration, proliferation, differentiation, apoptosis, and senescence through interaction with cell surface integrin receptors and heparan sulfate proteoglycans. CYR61 performs critical functions during embryonic development, and in adulthood CYR61 plays important roles in inflammation and tissue repair. It is associated with diseases related to chronic inflammation. Deregulated expression and signaling of CYR61 is associated with a variety of tumors exhibiting both tumorigenic and tumor suppressor properties. When up-regulated it promotes tumorigenesis, angiogenesis, and metastasis in certain cancers and when down-regulated, it suppresses tumor growth in other cancers. Increased expression correlates with the progression and estrogen independence of human breast cancers. Full-length CYR61 protein contains 381 amino acids with an N-terminal secretory signal peptide followed by four structurally distinct domains (modules); the IGF binding protein (IGFBP) domain, the von Willebrand Factor C (VWFC) domain, the Thrombospondin type-1 (TSP type-1) domain, and a C-terminal cysteine knot-like domain (CTCK).

MOLECULAR MASS

Recombinant Human CYR61 is a 39.5 kDa protein containing 357 amino acid residues.

AMINO ACID SEQUENCE

TCPAACHCPL EAPKCAPGVG LVRDGCPCCK VCAKQLNEDC SKTQPCDHTK GLECNFGASS TALKGICRAQ SEGRPCEYNS RIYQNGESFQ
 PNCKHQCTCI DGAVGCIPLC PQELSLPNLG CPNPRLVKVT GQCCEEWVCD EDSIKDPMED QDGLLGKELG FDASEVELTR NNELIAVGKG SSLKRLPVFG
 MEPRILYNPL QGQKCIQVTT SWSQCSKTCG TGISTRVTND NPECLVKET RICEVRPCGQ PVYSSLKKGK KCSKTKKSPE PVRFTYAGCL SVKKYRPKYC
 GSCVDGRCT PQLTRTVKMR FRCEGETFS KNVMMIQSCK CNYNCPHANE AAFPYRLFN DIHKFRD

SOURCE

E.coli

APPLICATIONS

Bioassay

PURITY

95 %

STORAGE

-20°C

PROTEIN CONTENT

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

ENDOTOXIN LEVEL

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

AUTHENTICITY

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

CROSS REACTIVITY

Mouse, Human, Chicken, N/A

BIOACTIVITY

Determined by the dose-dependent stimulation of the proliferation of murine 3T3 cells. The expected ED50 for this effect is 2.0-3.0 μg/ml.

RESEARCH AREAS

Angiogenesis & Cardiovascular, Cancer, Proliferation

RECONSTITUTION

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

REFERENCES

Francischetti IM, Kotsyfakis M, Andersen JF and Lukszo J. 2010. PLoS One. 5(2):e9356. Lorda-Diez CI, Montero JA, Diaz-Mendoza MJ, Garcia-Porrero JA and Hurlle JM. 2011. PLoS One. 6(9):e24546. Lin J, Zhou Z, Huo R, Xiao L, Ouyang G, Wang L, Sun Y, Shen B, Li D and Li N. 2012. J Immunol. 188 (11):5776-84. Schlage P, Kockmann T, Sabino F, Kizhakkedathu JN, Auf dem Keller and U. 2015. Mol Cell Proteomics. 4(12):3234-46. Yu Y, Prassas I, Dimitromanolakis A and Diamandis EP. 2015. J Biol Chem. 290(29):17762-75.

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