

TECHNICAL DATA SHEET

Recombinant Human Klotho (Carrier-Free)

Catalog Number: 21-9048

RPx-Pro™ Recombinant Protein
PRODUCT INFORMATION

CONTENTS

Recombinant Human Klotho (Carrier-Free)

DESCRIPTION

Klotho is a glycosylated protein that plays an important role in the regulation of phosphate and calcium homeostasis. Human Klotho exists in both membrane bound and secreted forms, and is predominantly expressed in the kidney convoluted tubules, and, to a lesser extent, in the brain, reproductive organs, endocrine glands, urinary bladder, skeletal muscle, placenta, and colon. Recombinant Human Klotho is a glycoprotein of 516 amino acid residues that migrates at an apparent molecular weight of 65-70 kDa by SDS-PAGE analysis under reducing conditions.

MOLECULAR MASS

Recombinant Human Klotho has a calculated molecular weight of 58.6 kDa.

AMINO ACID SEQUENCE

EPGDGAQTWA RFSRPPAPEA AGLFQGTFFD GFLWAVGSAA YQTEGGWQQH GKASIWDTF THHPLAPPGD SRNASLPLGA PSPLQPATGD
 VASDSYNNVF RDTEALRELG VTHYRFSISW ARVLPNGSAG VPNREGLRYY RLLERLREL GVQPVVTLYH WDLPQRLQDA YGGWANRALA
 DHFRDYAELC FRHFGGQVKY WITIDNPYVW AWHGYATGRL APGIRGSPRL GYLVAHNLLL AHAKVWHLYN TSFRPTQGGQ VSIALSSHWI NPPRMTDHSI
 KECQKSLDFV LGWFAKPVFI DGDYPESMKN NLSSILPDFT ESEKFKIKGT ADFFALCFGP TFSFQLLDPH MKFRQLESPN LRQLLSWIDL EFNHPQIFIV
 ENGWVFSGTT KRDDAKYMYI LKKFIMETLK AIKLDGVDVI GYTAWSLMDG FEWHRGYSIR RGLFYVDVFLS QDKMLLPKSS ALFYQKLIK NGFPPLPENQ
 PLEGTFFCDF AWGVVDNYIQ VSQTKPISS LTKPYH

SOURCE

CHO cells

APPLICATIONS

Bioassay

PURITY

98 %

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, Rat

BIOACTIVITY

Determined by the dose-dependent stimulation of the proliferation of Mouse NIH-3T3 cells. Recombinant Human Klotho is effective in a concentration range of 0.5-2.0 ug/ml.

RESEARCH AREAS

Proliferation, Stem Cells & Differentiation, Angiogenesis/Cardiovascular, Bones, Skeletal, Cartilage

RECONSTITUTION

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

REFERENCES

Abramovitz, L. KL1 internal repeat mediates klotho tumor suppressor activities and inhibits bFGF and IGF-I signaling in pancreatic cancer. 2011. Clinical Cancer Research; 17(13):4254-66. Hiyama, A. The effects of oxygen tension and antiaging factor Klotho on Wnt signaling in nucleus pulposus cells. 2012. Arthritis Research & Therapy; 14(3):R105

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