

## Klotho Protein, Human (CHO, His)

Cat. No.:	HY-P700011
Synonyms:	$\alpha$ -Klotho
Species:	Human
Source:	CHO
Accession:	Q9UEF7 (E34-S981)
Gene ID:	9365
Molecular Weight:	120-140kDa

### PROPERTIES

#### AA Sequence

EPGDGAQTWA	RFSRPPAPEA	AGLFQGTFPD	GFLWAVGSAA
YQTEGGWQQH	GKGASIWDTF	THHPLAPPGD	SRNASLPLGA
PSPLQPATGD	VASDSYNNVF	RDTEALRELG	VTHYRFSISW
ARVLPNGSAG	VPNREGLRYY	RRLLERLREL	GVQPVVTLYH
WDLPQRLQDA	YGGWANRALA	DHFRDYAELC	FRHFGGQVKY
WITIDNPYVV	AWHGYATGRL	APGIRGSPRL	GYLVAHNLLL
AHAKVWHLYN	TSFRPTQGGQ	VSIALSSHWI	NPRRMTDHSI
KECQKSLDFV	LGWFAKPVFI	DGDYPESMKN	NLSSILPDFT
ESEKKFIKGT	ADFFALCFGP	TLSFQLLDPH	MKFRQLESPN
LRQLLSWIDL	EFNHPQIFIV	ENGWVFSGTT	KRDDAKYMY
LKKFIMETLK	AIKLDGVDVI	GYTAWSLMDG	FEWHRGYSIR
RGLFYVDFLS	QDKMLLPKSS	ALFYQKLIK	NGFPPLPENQ
PLEGTFPCDF	AWGVVDNYIQ	VDTTLSQFTD	LNLYLWDVHH
SKRLIKVDGV	VTKKRKS YCV	DFAAIQPQIA	LLQEMHVTHF
RFSLDWALIL	PLGNQSQVNH	TILQYYRCMA	SELVRVNITP
VVALWQPMAP	NQGLPRLRAR	QGAWENPYTA	LAFAEYARLC
FQELGHHVKL	WITMNEPYTR	NMTYSAGHNL	LKAHALAWHV
YNEKFRHAQN	GKISIALQAD	WIEPACPFSQ	KDKEVAERVL
EFDIGWLAEP	IFGSGDYPWV	MRDWLNQRNN	FLLPYFTEDE
KKLIQGTDFD	LALSHYTTIL	VDSEKEDPIK	YNDYLEVQEM
TDITWLNSPS	QVAVVPWGLR	KVLNWLKFKY	GDLPMYIISN
GIDDGLHAED	DQLRVYYMQN	YINEALKAH I	LDGINLCGYF
AYSFNDRTAP	RFGLYRYAAD	QFEPKASKMH	YRKIIDSNGF
PGPETLERFC	PEEFTVCTEC	SFFHTRKS	

**Biological Activity** The EC<sub>50</sub> as determined by the dose-dependent stimulation of the proliferation of murine NIH/3T3 is less than 1  $\mu$ g/mL.

**Appearance** Lyophilized powder.

**Formulation** Lyophilized from a 0.2  $\mu$ m filtered solution of PBS, 50% Glycerol, pH7.4.

---

<b>Endotoxin Level</b>	<0.1 EU/μg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

## DESCRIPTION

### Background

The Klotho protein exhibits weak glycosidase activity towards glucuronylated steroids, but its in vivo inactivity as a glycosidase is suggested by the absence of essential active site Glu residues at positions 239 and 872. Additionally, Klotho may play a role in the regulation of calcium and phosphorus homeostasis by inhibiting the synthesis of active vitamin D. As an essential factor for the specific interaction between FGF23 and FGFR1, Klotho contributes to crucial signaling pathways. Furthermore, the Klotho peptide, generated by cleaving the membrane-bound isoform, is proposed to function as an anti-aging circulating hormone. This hormone has the potential to extend lifespan by inhibiting insulin/IGF1 signaling, presenting Klotho as a multifunctional protein with implications in both metabolic regulation and the aging process.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA