Human Fibroblast Growth Factor 23 (R179Q)

Origin:	Recombinant	**Cat. No.:**	41295
Tag:	N-terminal 6xHis	**Size:**	0.1 mg
Source:	*E.coli*	**Purity:**	>90%
Other names:	FGF23	**Species:**	Human

Description

Expressed in *E.coli* with total 271 AA. Mw: 30.4 KDa (calculated).
N-terminal 6xHis-tag, EK and TEV cleavage site, 44 extra AA (highlighted).
Recombinant antigen for research use or manufacturing only.

Introduction to the Molecule

FGF-23 is a bone-derived hormone that acts in the kidney to regulate phosphate homeostasis and vitamin D metabolism. The signaling receptor for FGF-23, a Klotho-FGFR1 (IIIc) complex, is an essential regulator of the renal sodium phosphate co-transporter and key vitamin D-metabolizing enzymes CYP27B1 and CYP24A1. Mature human FGF-23 contains an atypical (very low affinity) heparin binding site (aa 134-162), a proteolytic cleavage site (Arg179-Ser180), and multiple O-linked glycosylation sites with Thr178 being of particular importance. O-linked glycosylation at Thr178 blocks the cleavage of FGF-23, thereby preventing loss of FGF-23 activity. This recombinant human FGF23 bears mutation at 179th aa from arginine to glutamine preventing proteolytic cleavage.

Amino Acid Sequence

MRGSHHHHHHGMASMTGGQQMGRDLYDDDDKDRWGSENLYFQGAYPNASPLLGSS
WGGLIHLYTATARNSYHLQIHKNGHVDGAPHQTIYSALMIRSEDAGFVVITGVMSRRYLCMDF
RGNIFGSHYFDPENCRFQHQTLENGYDVYHSPQYHFLVSLGRAKRAFLPGMNPPPYSQFLSRRN
EIPLIHFNTPIPRRHTQSAEDDSERDPLNVLKPRARMTPAPASCSQELPSAEDNSPMASDPLGVV
RGGRVNTHAGGTGPEGCRPFAKFI

Applications

Standard ELISA test, Western Blot.

Formulation

Lyophilized at 1 mg/mL in 50mM Tris, 300mM NaCl, 400mM arginine.

Reconstitution

Add deionized water to prepare a working stock solution of approximately 1 mg/mL and let the lyophilized pellet dissolve completely.

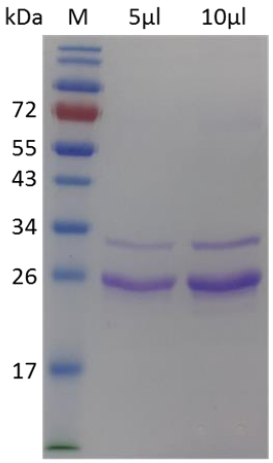
Storage

Store lyophilized protein at –20°C. Aliquot reconstituted protein and store at –80°C. Avoid repeated freezing /thawing cycles.

Quality Control Test

BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.

SDS-PAGE gel



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