

## ProQinase™ VEGF-R3

fms related tyrosine kinase 4

Recombinant Human Active Protein Kinase

HGNC Symbol: FLT4

Synonyms: VEGFR3, PCL

Product No.: 0225-0000-1

Lot: 012

**Description:** Human VEGF-R3, C-terminal fragment, amino acids N<sub>799</sub>-R<sub>1298</sub> (as in [NCBI/Protein](#) entry NP\_002011.1), N-terminal GST-HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** VEGF-R3 Lot 012, was confirmed as VEGF-R3 by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW**<sub>Fusion Protein</sub>: 85,565 Da

**Expression host:** Sf9 insect cells

**Purification:** GST-Affinity Chromatography

**Activation:** in vitro auto activation

**Storage buffer:** 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20 % glycerol

**Storage temperature:** -80°C

For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

**Protein concentration:** 0.151 µg/µl

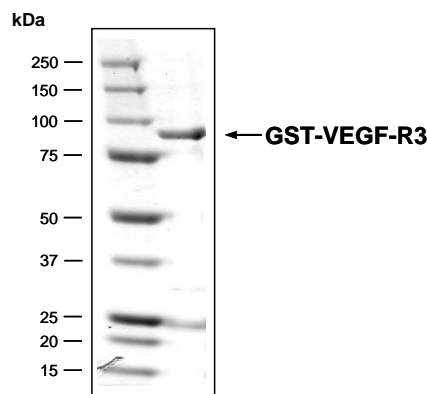
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

### Biochemical Parameters:

Specific kinase activity (P<sub>i</sub> transfer): 58 pmol/µg × min

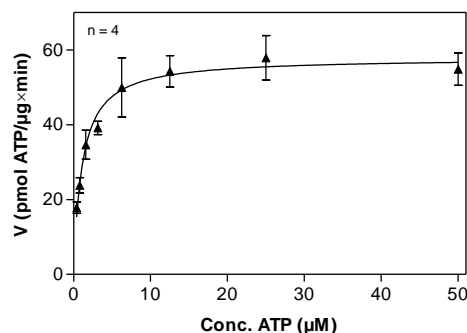
ATP-K<sub>M</sub>: 1.1 µM

### VEGF-R3 Lot 012: Coomassie stain



2.0 µg GST-VEGF-R3

### VEGF-R3 Lot 012: Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



- Assay conditions:  
60 mM HEPES-NaOH, pH 7.5  
3 mM MgCl<sub>2</sub>  
3 mM MnCl<sub>2</sub>  
3 µM Na-orthovanadate  
1.2 mM DTT  
50 µg/ml PEG<sub>20,000</sub>  
ATP (variable)  
Substrate: Poly(Glu:Tyr)4:1, 10 µg/ml  
Kinase: 1 µg/ml
- Filter binding assay  
MSFC membrane (Millipore)

### Additional assay technology:

VEGF-R3 Lot 012 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

## ProQinase™ VEGF-R3

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GST-VEGF-R3 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGNMRR	PAHADIKTGY	LSIIMDPGEV	PLEEQCEYLS	YDASQWEFPR	300
301	ERLHLGRVLG	YGAFGKVEA	SAFGIHKSS	CDTVAVKMLK	EGATASEQRA	LMSELKILH	360
361	IGNHLNVVNL	LGACTKPQGP	LMVIVEFCKY	GNLSNFLRAK	RDAFSPCAEK	SPEQRGRFRA	420
421	MVELARLDRR	RPGSSDRVLF	ARFSKTEGGA	RRASPDQEA	DLWLSPLTME	DLVCYSFQVA	480
481	RGMEFLASRK	CIHRDLAARN	ILLSESDVVK	ICDFGLARDI	YKDPDYVRKG	SARLPLKWMA	540
541	PESIFDKVYT	TQSDVWSFGV	LLWEIFSLGA	SPYPGVQINE	EFCQVRVDT	RMRAPELATP	600
601	AIRHIMLNCW	SGDPKARPAF	SDLVEILGDL	LQGRGLQEEE	EVCMAPRSSQ	SSEEGSFSQV	660
661	STMALHIAQA	DAEDSPPSLQ	RHSLAARYYN	WVSPFGCLAR	GAETRGSRRM	KTFEEFPMTF	720
721	TTYKGSVDNQ	TDSDGMVLA	EFEQIESRHR	QESGFR			780

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: VEGF-R3 fragment

VEGF-R3 wt <sup>1</sup> Amino Acid Sequence							
1	MQRGAALCLR	LWLCLGLLDG	LVSDYSMTTP	TLNITEESHV	IDTGDSLIS	CRGQHPLEWA	60
61	WPGAQEAPAT	GDKDSEDGTV	VRDCEGTDAR	PYCKVLLLHE	VHANDTGSYV	CYYKYIKARI	120
121	EGTTAASSYV	FVRDFEQPFI	NKPDTLNVNR	KDAMWVPCLV	SIPGLNVTLR	SQSSVLWPDG	180
181	QEVVWDDRRG	MLVSTPLLHD	ALYLQCETTW	GDQDFLSNPF	LVHITGNELY	DIQLLPRKSL	240
241	ELLVGEKLV	NCTVWAEFNS	GVTFDWDYPG	KQAERGWVP	ERRSQQTHTE	LSSILTIHNV	300
301	SQHDLGSYVC	KANNGIQRFR	ESTEVIHVEN	PFISVEWLKG	PILEATAGDE	LVKLPVKLAA	360
361	YPPPEFQWYK	DGKALSGRHS	PHALVLKEVT	EASTGTYTLA	LWNSAAGLR	NISLELVNV	420
421	PPQIHEKEAS	SPSIYSRHSR	QALTCTAYGV	PLPLSIQWHW	RPWTPCKMFA	QRSLRRRQQQ	480
481	DLMPQCRDWR	AVTTQDAVNP	IESLDTWTEF	VEGKNKTVSK	LVIQNAVSA	MYKCVVSNKV	540
541	GQDERLIYFY	VTTIPDGFTI	ESKPSEELLE	GQPVLLSCQA	DSYKYEHLRW	YRLNLSTLHD	600
601	AHGNPLLLDC	KNVHLFATPL	AASLEEVAPG	ARHATLSLSI	PRVAPEHEGH	YVCEVQDRRS	660
661	HDKHCHKKYL	SVQALEAPRL	TQNLTDLLVN	VSDSLEMQCL	VAGAHAPSIV	WYKDERLLEE	720
721	KSGVDLADSN	QKLSIQRVRE	EDAGPYLCSV	CRPKGCVNSS	ASVAVEGSED	KGSMEIVILV	780
781	GTGVIAVFFW	VLLLLIFCNM	RRPAHADIKT	GYSIIMDPG	EVPLEEQCEY	LSYDASQWEF	840
841	PRERLHLGRV	LGYGAFGKVV	EASAFGIHKG	SSCDTVAVKM	LKEGATASEQ	RALMSELKIL	900
901	IHIGHNLNVV	NLLGACTKPQ	GPLMVIVEFC	KYGNLSNFLR	AKRDAFSPCA	EKSPEQRGRF	960
961	RAMVELARLD	RRRPGSSDRV	LFARFSKTEG	GARRASPDQE	AEDLWLSPLT	MEDLVCYSFQ	1020
1021	VARGMEFLAS	RKCIHRDLAA	RNILLSESDV	VKICDFGLAR	DIYKDPDYVR	KGSARLPLKW	1080
1081	MAPESIFDKV	YTTQSDVWSF	GVLLWEIFSL	GASPYPGVQI	NEEFQVRVDT	GTRMRAPELA	1140
1141	TPAIRHIMLN	CWSGDPKARP	AFSDLVEILG	DLLQGRGLQE	EEVCMAPRS	SQSSEEGSFS	1200
1201	QVSTMALHIA	QADAEDSPPS	LQRHSLAARY	YNWVSPFGCL	ARGAETRGS	RMKTFFEEFPM	1260
1261	TPTTYKGSVD	NQTDSDGMVLA	SEFEQIESR	HRQESGFR			1320

blue: VEGF-R3 sequence expressed in recombinant protein

<sup>1</sup>NCBI/Protein accession number NP\_002011.1