

ProQinase™ EGF-R L718Q

epidermal growth factor receptor

Recombinant Human Active Protein Kinase

HGNC Symbol: EGFR

Synonyms: ERBB, ERBB1

Product No.: 1747-0000-1

Lot: 001

Description: Human EGF-R, C-terminal fragment, amino acids H₆₇₂-A₁₂₁₀ (as in [NCBI/Protein](#) entry NP_005219.2) with a L718Q point mutation, N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: EGF-R L718Q Lot 001, was confirmed as EGF-R by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 89,185 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

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

Storage temperature: -80°C

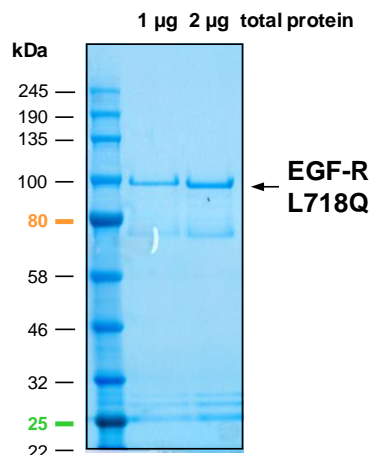
For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.268 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

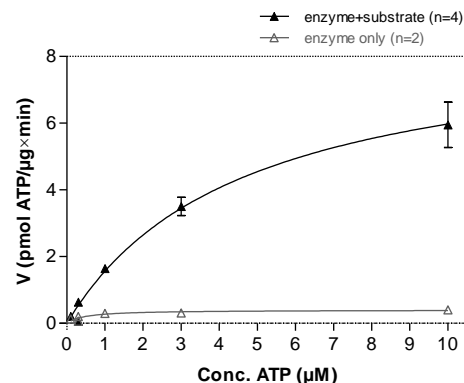
Biochemical Parameters:

Specific kinase activity (P_i transfer): 8.7 pmol/µg × min
ATP-K_M: 4.6 µM

EGF-R L718Q Lot 001: Coomassie stain



EGF-R L718Q Lot 001: Determination of V_{max} and K_M value for ATP



- Assay conditions:
60 mM HEPES-NaOH, pH 7.5
3 mM MgCl₂
3 mM MnCl₂
3 µM Na-orthovanadate
1.2 mM DTT
50 µg/ml PEG_{20,000}
ATP (variable)
Substrate: TRK-C derived peptide 20 µg/ml
Kinase: 4 µg/ml
- Filter binding assay
MSIP membrane (Millipore)

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GST-EGF-R L718Q Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQG WQATF	GGGDHPPKSD	PMG HHHHHG	RDS LEVLFQCG	240
241	PLAMGHIVRK	RTLRLRLQER	ELVEPLTPSG	EAPNQALLRI	LKETEFKKIK	VGGSGAFGTV	300
301	YKGLWIPEGE	KVKIPVAIKE	LREATSPKAN	KEILDEAYVM	ASVDNPHVCR	LLGICLSTV	360
361	QLITQLMPFG	CLLDYVREHK	DNIGSQYLLN	WCVQIAKGMN	YLEDRLVHR	DLAARNVLVK	420
421	TPQHVKITDF	GLAKLLGAE	KEYHAEGGKV	PIKWMALESI	LHRIYTHQSD	VWSYGVTVWE	480
481	LMTFGSKPYD	GIPASEISSI	LEKGERLPQP	PICTIDVYMI	MVKCWMIDAD	SRPKFRELI	540
541	EFSKMARDPQ	RYLVIQGDER	MHLPSPTDSN	FYRALMDEED	MDDVDADEY	LIPQQGFFSS	600
601	PSTSRTPLLS	SLSATSNNST	VACIDRNLQ	SCPIKEDSFL	QRYSSDPTGA	LTEDSIDDTF	660
661	LPVPEYINQS	VPKRPAGSVQ	NPVYHNQPLN	PAPSRDPHYQ	DPHSTAVGNP	EYLNTVQPTC	720
721	VNSTFDSPA	WAQKGS HQIS	LDNPDYQQDF	FPKEAKPNGI	FKGSTAENAE	YLRVAPQSSE	780
781	FIGA						840

1-218: GST **Red**: HIS6-tag **Green**: 3C cleavage site **blue**: EGF-R fragment **boxed**: L718Q

EGF-R wt ¹ Amino Acid Sequence							
1	MRPSGTAGAA	LLALLAALCP	ASRALEEKV	COGTSNKLTQ	LGT FEDHFLS	LQRMFN NCEV	60
61	VLGNLEITYV	QRNYDLSFLK	TIQEVAGYVL	IALNTVERIP	LENLQIIRGN	MYYENS YALA	120
121	VLSNYDANKT	GLKELPMRNL	QEILHGAVRF	SNNPALCNVE	SIQWRDIVSS	DFLSNMSMDF	180
181	QNHLGSCQKC	DPSCPNGSCW	GAGEENCQKL	TKIICAQQCS	GRCRGKSPSD	CCHNQCAAGC	240
241	TGPRES DCLV	CRKFRDEATC	KDTCPPMLY	NPTTYQMDVN	PEGKYSFGAT	CVKKCPRNVV	300
301	VTDHGSCVRA	CGADSYEMEE	DGVRKCKKCE	GPCRKVCNGI	GIGEFKDSL S	INATNIKHFK	360
361	NCT SISGLH	ILPVAFRGDS	FTHTPPLDPQ	ELDILKTVKE	ITGFLLIQAW	PENRTDLHAF	420
421	ENLEIIRGRT	KQHGQFSLAV	VSLNITSLGL	RS LKEISDGD	VIISGNKNLC	YANTINWKKL	480
481	FGTSGQKTKI	ISNRGENSCK	ATGQVCHALC	SPEGCWGPEP	RDCVSCRNV S	RGRECVDKCN	540
541	LLEGE PREFV	ENSECIQCHP	ECLPQAMNIT	CTGRGPDNCI	QCAHYIDGPH	CVKTC PAVGM	600
600	GENNTLVWKY	ADAGHVCHLC	HPNCTYGCTG	PGLEGCP TNG	PKIPSIATGM	VGALLLLLVV	660
661	ALGIGLFMRR	RHIVRKRTL	RLLQERELVE	PLTPSGEAPN	QALLRILKET	EFKKIKV LGS	720
721	GAFGTVYKGL	WIPEGEKVKI	PVAIKELREA	TSPKANKEIL	DEAYVMASVD	NPHVCRLLGI	780
781	CLTSTVQLIT	QLMPFGCLLD	YVREHKDNIG	SOYLLNWC VQ	IAKGMNYLED	RRLVHRDLAA	840
841	RNVLVKTPQH	VKITDFGLAK	LLGAEKEYH	AEGGKVP IKW	MALESILHRI	YTHQSDVWSY	900
901	GVTVWELMTF	GSKPYDGIPA	SEISSILEKG	ERLPQPP ICT	IDVYMIMVCK	WMIDADSRPK	960
961	FRELIIEFSK	MARDPQRYLV	IQGDERMHL P	SPTDSNFYRA	LMDEEDMDDV	VDADEYLIPQ	1020
1021	QGFFSSPSTS	RTPLLSLSA	TSNNSTVACI	DRNGLQSCPI	KEDSFLQ RYS	SDPTGALTED	1080
1081	SIDDTFLPVP	EYINQSVPKR	PAGSVQNPVY	HNQPLNPAPS	RDPHYQDPHS	TAVGNPEYLN	1140
1141	TVQPTCVNST	FDSPAHWAQK	GSHQISLDNP	DYQQDFFPKE	AKPNGIFKGS	TAENA EYLRV	1200
1201	APQSSEFIGA						1260

blue: kinase sequence expressed in recombinant protein **Red**: variant in recombinant protein

¹[NCBI/Protein](#) accession number NP_005219.2