

## ProQinase™ EGF-R T790M/C797S/L858R

epidermal growth factor receptor

Recombinant Human Active Protein Kinase

HGNC Symbol: EGFR

Synonyms: ERBB, ERBB1

Product No.: 1701-0000-1

Lot: 001

**Description:** Human EGF-R, C-terminal fragment, amino acids M<sub>672</sub>-A<sub>1210</sub> (as in [NCBI/Protein](#) entry NP\_005219.2) with point mutations T<sub>790</sub>M, C<sub>797</sub>S, L<sub>858</sub>R. N-terminal GST-HIS<sub>6</sub> fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

**Product identity:** EGF-R T790M/C797S/L858R Lot 001, was confirmed as EGF-R by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW<sub>Fusion Protein</sub>:** 89,227 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:** 0.230 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

**Biochemical Parameters:**

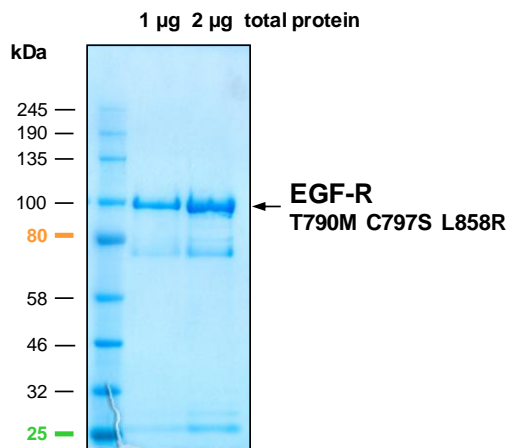
Specific kinase activity (P<sub>i</sub> transfer): 243 pmol/µg × min  
ATP-K<sub>M</sub>: 2.5 µM

**Additional assay technology:**

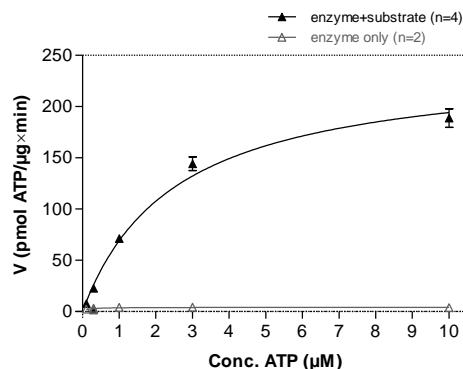
EGF-R T790M/C797S/L858R Lot 001 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega

ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

EGF-R T790M/C797S/L858R Lot 001:  
Coomassie stain



EGF-R T790M/C797S/L858R Lot 001:  
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: TRK-C derived peptide 20 µg/ml  
Kinase: 0.5 µg/ml
- Filter binding assay  
MSIP membrane (Millipore)

# ProQinase™ EGF-R T790M/C797S/L858R

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GST-EGF-R T790M/C797S/L858R Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHGG	RDS <b>LEVLFCG</b>	240
241	<b>PLAMGHIVRK</b>	<b>RTLRLQLQER</b>	<b>ELVEPLTPSG</b>	<b>EAPNQALLRI</b>	<b>LKETEFKKIK</b>	<b>VLGSGAFGTV</b>	300
301	<b>YKGLWIPEGE</b>	<b>KVKIPVAIKE</b>	<b>LREATSPKAN</b>	<b>KEILDEAYVM</b>	<b>ASVDNPHVCR</b>	<b>LLGICLTSFV</b>	360
361	<b>QLIMQLMPFG</b>	<b>SLLDYVREHK</b>	<b>DNIGSQYLLN</b>	<b>WCVQIAKGMN</b>	<b>YLEDRLVHR</b>	<b>DLAARNVLVK</b>	420
421	<b>TPQHVKITDF</b>	<b>GRAKLLGAE</b>	<b>KEYHAEGGKV</b>	<b>PIKWMALESI</b>	<b>LHRIYTHQSD</b>	<b>VWSYGVTVWE</b>	480
481	<b>LMTFGSKPYD</b>	<b>GIPASEISSI</b>	<b>LEKGERLPQP</b>	<b>PICTIDVYMI</b>	<b>MVKCWMIDAD</b>	<b>SRPKFRELI</b>	540
541	<b>EFSKMARDPQ</b>	<b>RYLVIQGDER</b>	<b>MHLPSPTDSN</b>	<b>FYRALMDEED</b>	<b>MDDVDADEY</b>	<b>LIPQQGFFSS</b>	600
601	<b>PSTSRTPLLS</b>	<b>SLSATSNNST</b>	<b>VACIDRNLQ</b>	<b>SCPIKEDSFL</b>	<b>QRYSSDPTGA</b>	<b>LTEDSIDDTF</b>	660
661	<b>LPVPEYINQS</b>	<b>VPKRPAGSVQ</b>	<b>NPVYHNQPLN</b>	<b>PAPSRDPHYQ</b>	<b>DPHSTAVGNP</b>	<b>EYLNVTQPTC</b>	720
721	<b>VNSTFDSPA</b>	<b>WAQKGSQIS</b>	<b>LDNPDYQDF</b>	<b>FPKEAKPNGI</b>	<b>FKGSTAENAE</b>	<b>YLRVAPQSS</b>	780
781	<b>FIGA</b>						840

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

EGF-R wt <sup>1</sup> Amino Acid Sequence							
1	MRPSGTAGAA	LLALLAALCP	ASRALEEKV	COGTSNKLTQ	LGTTFEDHFLS	LQRMFNCEV	60
61	VLGNELEITYV	QRNYDLSFLK	TIQEVAGYVL	IALNTVERIP	LENLQIIRGN	MYYENSYALA	120
121	VLSNYDANKT	GLKELPMRNL	QEILHGAVRF	SNNPALCNVE	SIQWRDIVSS	DFLSNMSMDF	180
181	QNHLGSCQKC	DPSCPNGSCW	GAGEENCQKL	TKIICAQQCS	GRCRGKSPSD	CCHNQCAAGC	240
241	TGPRESCLV	CRKFRDEATC	KDTCPPMLY	NPTTYQMDVN	PEGKYSFGAT	CVKKCPRNVV	300
301	VTDHGSCVRA	CGADSYEMEE	DGVRKCKKCE	GPCRKVCNGI	GIGEFKDSLS	INATNIKHFK	360
361	NCTSISGDLH	ILPVAFRGDS	FTHTPPLDPQ	ELDILKTVKE	ITGFLLIQAW	PENRTDLHAF	420
421	ENLEIIRGRT	KQHGGQFSLAV	VSLNITSLGL	RSLKEISDGD	VIISGNKNLC	YANTINWKKL	480
481	FGTSGQTKI	ISNRGENSCK	ATGQVCHALC	SPEGCWGPEP	RDCVSCRNV	RGRECVKCN	540
541	LLEGEPEFV	ENSECIQCHP	ECLPQAMNIT	CTGRGPDNCI	QCAHYIDGPH	CVKTCPAGVM	600
600	GENNTLVWKY	ADAGHVCHLC	HPNCTYGCTG	PGLEGCPNG	PKIPSIATGM	VGALLLLLVV	660
661	ALGIGLFMR	<b>RHIVRKRTL</b>	<b>RLQERELVE</b>	<b>PLTPSGEAPN</b>	<b>QALLRILKET</b>	<b>EFKKIKVLGS</b>	720
721	<b>GAFGTVYKGL</b>	<b>WIPEGEKVKI</b>	<b>PVAIKELREA</b>	<b>TSPKANKEIL</b>	<b>DEAYVMASVD</b>	<b>NPHVCRLGI</b>	780
781	<b>CLTSTVQLIT</b>	<b>QLMPFGCLLD</b>	<b>YVREHKDNIG</b>	<b>SOYLLNWCVQ</b>	<b>IAGMNYLED</b>	<b>RRLVHRDLAA</b>	840
841	<b>RNVLVKTPQH</b>	<b>VKITDFGLAK</b>	<b>LLGAEKEYH</b>	<b>AEGGKVPKW</b>	<b>MALESILHRI</b>	<b>YTHQSDVWSY</b>	900
901	<b>GVTVWELMTF</b>	<b>GSKPYDGIPA</b>	<b>SEISSILEKG</b>	<b>ERLPQPPICT</b>	<b>IDVYMIMVKC</b>	<b>WMIDADSRPK</b>	960
961	<b>FRELIIIEFSK</b>	<b>MARDPQRYLV</b>	<b>IQGDERMHL</b>	<b>SPTDSNFYRA</b>	<b>LMDEEDMDV</b>	<b>VDADEYLIPQ</b>	1020
1021	<b>QGFSSPSTS</b>	<b>RTPLSSLSA</b>	<b>TSNNSTVACI</b>	<b>DRNLQSCPI</b>	<b>KEDSFLQRY</b>	<b>SDPTGALTED</b>	1080
1081	<b>SIDDTFLPVP</b>	<b>EYINQSVPKR</b>	<b>PAGSVQNPVY</b>	<b>HNQPLNPAPS</b>	<b>RDPHYQDPS</b>	<b>TAVGNPEYLN</b>	1140
1141	<b>TVQPTCVNST</b>	<b>FDSPAHWQK</b>	<b>GSHQISLDNP</b>	<b>DYQDFFPKE</b>	<b>AKPNGIFKGS</b>	<b>TAENAEYLRV</b>	1200
1201	<b>APQSSEFIGA</b>						1260

**blue**: EGF-R sequence expressed in recombinant protein **Red**: variant in recombinant protein

<sup>1</sup>[NCBI/Protein](https://www.ncbi.nlm.nih.gov/Protein) accession number NP\_005219.2