

ProQinase™ CSF1R

colony stimulating factor 1 receptor

Recombinant Human Active Protein Kinase

HGNC Symbol: CSF1R

Synonyms: c-FMS, CD115, CSFR, FIM2, FMS

Product No.: 0512-0000-1

Lot: 004

Description: Human CSF1-R, C-terminal fragment, amino acids K₅₄₃-C₉₇₂ (as in [NCBI/Protein](#) entry NP_005202.2), activated, N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: CSF1-R, Lot 004, was confirmed as CSF1-R by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 77,733 Da

Expression host: Sf9 insect cells/E.coli

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: 0.117 µg/µl

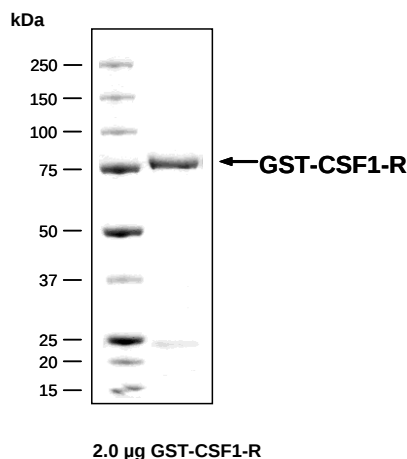
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

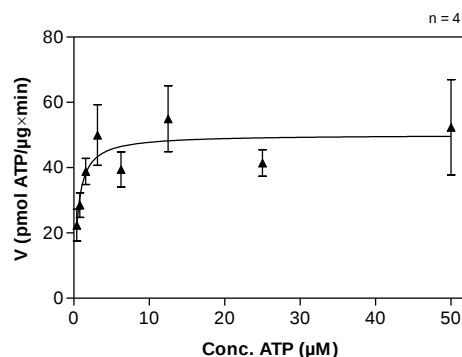
Specific kinase activity (P_i transfer): 50 pmol/µg × min

ATP-K_M: 0.5 µM

CSF1-R Lot 004: Coomassie stain



CSF1-R Lot 004: 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: Poly(Glu:Tyr)_{4:1}, 2.5 µg/ml
Kinase: 1 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

Additional assay technology:

CSF1-R Lot 004 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

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GST-CSF1R Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLIERDEGDK	WRNKKFELGL	EFNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GICSRNSKPK	YQVRWKIIES	YEGNSYTFID	PTQLPYNEKW	EFPRNNLQFG	300
301	KTLAGAGAFGK	VVEATAFGLG	KEDAVLKVAV	KMLKSTAHAD	EKEALMSELK	IMSHLGQHEN	360
361	IVNLLGACTH	GGPVLVITEY	CCYGDLLNFL	RRKAEAMLGP	SLSPGQDPEG	GVDYKNIHLE	420
421	KKYVRRDSGF	SSQGVDTYVE	MRPVSTSSND	SFSEQDLDE	DGRPLELRDL	LHFSSQVAQG	480
481	MAFLASKNCI	HRDVAARNVL	LTNGHVAKIG	DFGLARDIMN	DSNYIVKGNA	RLPVKWMape	540
541	SIFDCVYTVQ	SDVWSYGILL	WEIFSLGLNP	YPGILVNSKF	YKLVKDGQYM	AQPAFAPKNI	600
601	YSIMQACWAL	EPHTRPTFQQ	ICSFLQEQAQ	EDRRERDYN	LPSSSRSGGS	GSSSSELEEE	660
661	SSSEHLTCCE	QGDIAQPLLQ	PNNYQFC				720

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: CSF1R fragment

CSF1R wt ¹ Amino Acid Sequence							
1	MGPGLVLLLL	VATAWHGQGI	PVIEPSVPEL	VVKPGATVTL	RCVGNNGSVEW	DGPPSPHWTL	60
61	YSDGSSSILS	TNNATFQNTG	TYRCTEPGDP	LGGSAAIHLY	VKDPAWPWNV	LAQEVVVFED	120
121	QDALLPCLLT	DPVLEAGVSL	VRVRGRPLMR	HTNYSFSPWH	GFTIHRAKFI	QSQDYQCSAL	180
181	MGRKVMSSIS	IRLKVQKVIP	GPPALTLVPA	ELVRIRGEAA	QIVCSASSVD	VNFDVFLQHN	240
241	NTKLAIPQQS	DFHNNRYQKV	LTLNLDQVDF	QHAGNYSCVA	SNVQGHST	MFFRVVESAY	300
301	LNLSSQNLI	QEVTVGEGLN	LKVMVEAYPG	LQGFNWTYLG	PFSHQPEPK	LANATTKDTY	360
361	RHTFTLSLPR	LKPSEAGRYS	FLARNPGGWR	ALTFELTLRY	PPEVSVIWF	INGSGTLLCA	420
421	ASGYPPPNVT	WLQCSGHTDR	CDEAQVLQVW	DDPYPEVLSQ	EPFHKVTQVS	LLTVETLEHN	480
481	QTYECRAHNS	VGSGSWAFIP	ISAGATHPP	DEFLFTPVV	ACMSIMALLL	LLLLLLLYKY	540
541	KQKPKYQVRW	KIIESYEGNS	YTFIDPTQLP	YNEKWEFPRN	NLQFGKTLGA	GAFGKVVEAT	600
600	AFGLGKEDAV	LKVAVKMLKS	TAHADEKEAL	MSELKIMSHL	GQHENIVNLL	GACTHGGPVL	660
661	VITEYCCYGD	LLNFLRRKAE	AMLGPSLSPG	QDPEGGVLYK	NIHLEKKYVR	RDSGFSSQGV	720
721	DTYVEMRPVS	TSSNDSFSEQ	DLDKEDGRPL	ELRDLHLFSS	QVAQGMAFLA	SKNCIHRDVA	780
781	ARNVLLTNGH	VAKIGDFGLA	RDIMNDSNYI	VKGNAFLPVK	WMAPEISIFDC	VYTVQSDVWS	840
841	YGILLWEIFS	LGLNPYPGIL	VNSKFYKLVK	DGYQMAQPAF	APKNIYSIMQ	ACWALEPTHR	900
901	PTFQQICSFL	QEQAQEDRRE	RDYTNLPSSS	RSGSGSSSSS	ELEEESSEH	LTCCEQGDIA	960
961	QPLLQPNNYQ	FC					1020

blue: CSF1R sequence expressed in recombinant protein Red: variant in recombinant protein

¹NCBI/Protein accession number NP_005202.2