

ProQinase™ ERBB4

erb-b2 receptor tyrosine kinase 4

Recombinant Human Active Protein Kinase

HGNC Symbol: ERBB4

Synonyms: HER4

Product No.: 0109-0000-1

Lot: 007

Description: Human ERBB4, C-terminal fragment, amino acids R₆₇₆-V₁₃₀₇ (as in [NCBI/Protein](#) entry NP_005226.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: ERBB4 Lot 007, was confirmed as ERBB4 by specific Western blotting using anti ERBB4 antibody

Theoretical MW_{Fusion Protein}: 102,062 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM TRIS-HCl pH 8.0, 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: 0.232 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

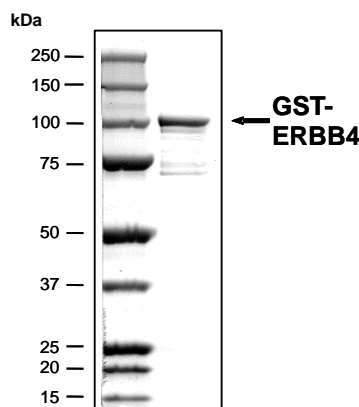
Biochemical Parameters:

Specific kinase activity (P_i transfer): 137 pmol/µg × min
ATP-K_M: 1.9 µM

Additional assay technology:

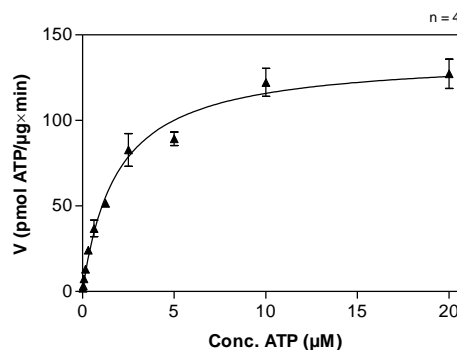
ERBB4 Lot 007 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

ERBB4 Lot 007: Coomassie stain



2.0 µg GST-ERBB4

ERBB4 Lot 007: 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} 20 µg/ml
Kinase: 1 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

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GST-ERBB4 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	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRG SPGLD	GICSIEEFRR	PRRSIKKKR	ALRRFLETEL	VEPLTPSGTA	PNQAQLRLK	300
301	ETELKRVKVL	GSGAFGTVYK	GIWVPEGETV	KIPVAIKILN	ETTGPKANVE	FMDEALIMAS	360
361	MDHPHLVRL	GVCLSPTIQL	VTQLMPHGCL	LEYVHEHKDN	IGSQLLLNWC	VQIAKGM MYL	420
421	EERRLVHRDL	AARNVLVKSP	NHVKITDFGL	ARLLEGDEKE	YNADGGKMPI	KWMALECIHY	480
481	RKFTHQSDVW	SYGVTIWELM	TFGGKPYDGI	PTREIPDLE	KGERLPQ PPI	CTIDVYVMV	540
541	KCWMIDASR	PKFKELAAEF	SRMARDPQRY	LVIQGD DRMK	LSPND SKFF	QNLLDEEDLE	600
601	DMMDAEEYLV	PQAFNIP PPI	YTSRARIDSN	RSEIGHSPPP	AYTPMSGNQF	VYRDGGFAAE	660
661	QGVSVPYRAP	TSTIPEAPVA	QGATAEIFDD	SCCNGTLRKP	VAPHVQEDSS	TQRYSDP TV	720
721	FAPERSPRGE	LDEEGYMT PM	RDKPKQEYLN	PVEENPFVSR	RKNGDLQALD	NPEYHNASNG	780
781	PPKAED EYVN	EPLYLNTFAN	TLGKAEYLKN	NILSMPEKAK	KAFDNP DYWN	HSLPPRSTLQ	840
841	HPDYLQ EYST	KYFYKQNGRI	RPIVAENPEY	LSEFSLKPGT	VLPPPPYRHR	NTV	900

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: ERBB4 fragment

ERBB4 wt ¹ Amino Acid Sequence							
1	MKPATGLWVW	VSLLVAAAGTV	QPSDSQSVCA	G TENKLSLS	DLEQQYRALR	KYYENCEVVM	60
61	GNLEITSIEH	NRDLSFLRSV	REVTGYVLVA	LNQFRYLPLE	NLRIIRGTKL	YEDRYALAI F	120
121	LN YRKDGNFG	LQELGLKNLT	EILNGGVYVD	QNKFLCYADT	IHWQDIVRNP	WPSNLT LVST	180
181	NGSSGCGRCH	KSCTGRCWGP	TENHCQTLTR	TVCAEQCDGR	CYGPVSDCC	HRECAGGCSG	240
241	PKD TDCFACM	NFND SGACVT	QCPQTFVYNP	TTFQLEHNFN	AKYTYGAF CV	KKCPHFVVD	300
301	SSSCVRACPS	SKMEVEENGI	KMCKPCTDIC	PKACDGIGTG	SLMSAQTVDS	SNIDKFINCT	360
361	KINGNLIFLV	TGIHGDPYNA	IEAIDPEKLN	VFRTVREITG	FLNIQSWPPN	MTDFSVFSLN	420
421	VTIGGRVLYS	GLSLLILKQQ	GITSLQFQSL	KEISAGNIYI	TDNSNLCYH	TINWTTLFST	480
481	INQRIVIRDN	RKAENCTAEG	MVCNHLCS SD	GCWGP GPDQC	LSCRRFSRGR	ICIESCNLYD	540
541	GEFREFENG S	ICVECDPQCE	KMEDGLLTCH	GPGPDNCTKC	SHFKDGPNCV	EKCPDGLQGA	600
601	NSFIFKYADP	DRECHPCHPN	CTQGCNGPTS	HDCIYYPWTG	HSTLPQHART	PLIAAGVIGG	660
661	LFILVIVGLT	FAVYVRRKSI	KKKRALRRFL	ETELVEPLTP	SGTAPNQAQL	RILKETELKR	720
721	VKVLGSGAFG	TVYKGIWVPE	GETVKIPVAI	KILNETTGPK	ANVEFMDEAL	IMASMDHPLV	780
781	VRLLVGCLSP	TIQLVTQLMP	HGCLLEYVHE	HKDNIGSQLL	LNWCVQIAKG	M MYLEERRLV	840
841	HRDLAARNVL	VKSPNHVKIT	DFGLARLLEG	DEKEYNADGG	KMPIKWMAL E	CIHYRKFTHQ	900
901	SDVWSYGV TI	WELMTFGGKP	YDGIPTREIP	DLLEKGERLP	QPPICTIDVY	MVMVKCWMID	960
961	ADSRPKFKEL	AAEF SRMARD	PQRYLVIQGD	DRMKLSPND	SKFFQNL LDE	EDLEDMDAE	1020
1021	EYLV PQA FNI	PPPIYTSRAR	IDSNRSEIGH	SPPPAYTPMS	GNQFVYRDGG	FAAEQGVSV P	1080
1081	YRAP TSTIPE	APVAQGATAE	IFDSDCCNGT	LRKP VAPHVQ	EDSSTQRYSA	DPTVFAPERS	1140
1141	PRGELDEEGY	MTPMRDKPKQ	EYLN PVEENP	FVSRRKNGDL	QALDNPEYHN	ASNGPPKAED	1200
1201	EYVNEPLYLN	TFANTLGKAE	YLNKNNISMP	EKAKAFDNP	DYWNHSLPPR	STLQHPDYLQ	1260
1261	EYSTKYFYKQ	NGRIRPIVAE	NPEYLSEFSL	KPGTVLPPPP	YRHRNTV		1320

blue: ERBB4 sequence expressed in recombinant protein

¹[NCBI/Protein](https://www.ncbi.nlm.nih.gov/protein/NP_005226.1) accession number NP_005226.1