Certificate of Analysis

BRSK2

BR serine/threonine kinase 2

Recombinant Human Active Protein Kinase

HGNC Symbol: BRSK2

Synonyms: C11orf7, FLJ41362, HUSSY-12, PEN11B, SAD1, STK29

Product No.: 1524-0000-1

Lot: 005

Description: Human BRSK2, full-length, amino acids M_1-L_{674} (as in NCBI/Protein entry NP_001243558.1), N-terminal GST-HIS_6 fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: BRSK2 Lot 005, was confirmed as BRSK2 by mass spectroscopy LC-ESI-MS/MS

Theoretical $MW_{Fusion\ Protein}$: 103,239 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

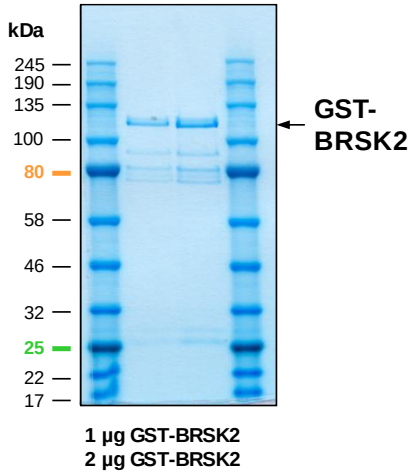
Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20 % glycerol

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!

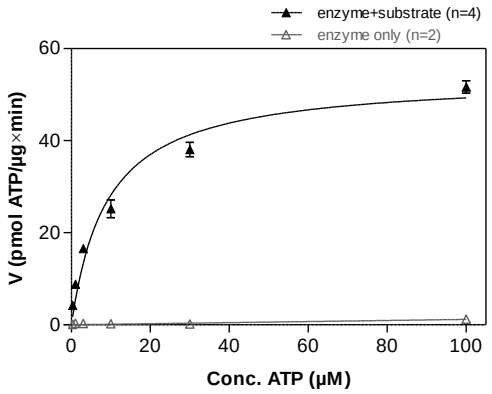
Protein concentration: 0.494 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:
Specific kinase activity (P_i transfer): 54 pmol/µg × min
ATP-K_M: 9.1 µM

BRSK2 Lot 005:
Coomassie stain



BRSK2 Lot 005:
Determination of V_{max} and K_M value for ATP



Determination of K_M value & Specific activity:
- Assay conditions:
  60 mM HEPES-NaOH, pH 7.5
  3 mM $MgCl_2$
  3 mM $MnCl_2$
  3 µM Na-orthovanadate
  1.2 mM DTT
  50 µg/ml $PEG_{20.000}$
  ATP (variable)
  Substrate: CHKtide (KKKVSRSGLYRSPSMPENLNRPR) 80 µg/ml
  Kinase: 2 µg/ml
- Filter binding assay
  MSPH membrane (Millipore)

Additional assay technology: BRSK2 Lot 005
was also successfully tested by ProQinase 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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BRSK2

Product No.: 1524-0000-1

GST-BRSK2 Recombinant Fusion Protein Amino Acid Sequence

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   1  MSPILGYWKI KGLVQPTRLL LEYLEEKYEE HLYERDEGDK WRNKKFELGL EFPNLPYYID  60
  61  GDVKLTQSMA IIRYIADKHN MLGGCPKERA EISMLEGAVL DIRYGVSRIA YSKDFETLKV 120
 121  DFLSKLPEML KMFKDRLCHK TYLNGDHVTH PDFMLYDALD VVLYMDPMCL DAFPKLVCFK 180
 181  KRIEAIPQID KYLKSSKYIA WPLQGWQATF GGGDHPPKSD PMGHHHHHHG RDSLEVLFQG 240
 241  PMTSTGKDGG AQHAQYVGPY RLEKTLGKGQ TGLVKLGVHC VTCQKVAIKI VNREKLSESV 300
 301  LMKVEREIAI LKLIEHPHVL KLHDVYENKK YLYLVLEHVS GGELFDYLVK KGRLTPKEAR 360
 361  KFFRQIISAL DFCHSHSICH RDLKPENLLL DEKNNIRIAD FGMASLQVGD SLLETSCGSP 420
 421  HYACPEVIRG EKYDGRKADV WSCGVILFAL LVGALPFDDD NLRQLLEKVK RGVFHMPHFI 480
 481  PPDCQSLLRG MIEVDAARRL TLEHIQKHIW YIGGKNEPEP EQPIPRKVQI RSLPSLEDID 540
 541  PDVLDSMHSL GCFRDRNKLL QDLLSEEENQ EKMIYFLLLD RKERYPSQED EDLPPRNEID 600
 601  PPRKRVDSPM LNRHGKRRPE RKSMEVLSVT DGGSPVPARR AIEMAQHGQR SRSISGASSG 660
 661  LSTSPLSSPR VTPHPSPRGS PLPTPKGTPV HTPKESPAGT PNPTPPSSPS VGGVPWRARL 720
 721  NSIKNSFLGS PRFHRRKLQV PTPEEMSNLT PESSPELAKK SWFGNFISLE KEEQIFVVIK 780
 781  DKPLSSIKAD IVHAFLSIPS LSHSVISQTS FRAEYKATGG PAVFQKPVKF QVDITYTEGG 840
 841  EAQKENGIYS VTFTLLSGPS RRFKRVVETI QAQLLSTHDP PAAQHLSEPP PPAPGLSWGA 900
 901  GLKGQKVATS YESSL                                                  960
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1-218: GST **Red**: HIS6-tag **Green**: 3C cleavage site **blue**: BRSK2

BRSK2 wt[1] Amino Acid Sequence

```
1    MTSTGKDGGA QHAQYVGPYR LEKTLGKGQT GLVKLGVHCV TCQKVAIKIV NREKLSESVL  60
61   MKVEREIAIL KLIEHPHVLK LHDVYENKKY LYLVLEHVSG GELFDYLVKK GRLTPKEARK 120
121  FFRQIISALD FCHSHSICHR DLKPENLLLD EKNNIRIADF GMASLQVGDS LLETSCGSPH 180
181  YACPEVIRGE KYDGRKADVW SCGVILFALL VGALPFDDDN LRQLLEKVKR GVFHMPHFIP 240
241  PDCQSLLRGM IEVDAARRLT LEHIQKHIWY IGGKNEPEPE QPIPRKVQIR SLPSLEDIDP 300
301  DVLDSMHSLG CFRDRNKLLQ DLLSEEENQE KMIYFLLLDR KERYPSQEDE DLPPRNEIDP 360
361  PRKRVDSPML NRHGKRRPER KSMEVLSVTD GGSPVPARRA IEMAQHGQRS RSISGASSGL 420
421  STSPLSSPRV TPHPSPRGSP LPTPKGTPVH TPKESPAGTP NPTPPSSPSV GGVPWRARLN 480
481  SIKNSFLGSP RFHRRKLQVP TPEEMSNLTP ESSPELAKKS WFGNFISLEK EEQIFVVIKD 540
541  KPLSSIKADI VHAFLSIPSL SHSVISQTSF RAEYKATGGP AVFQKPVKFQ VDITYTEGGE 600
601  AQKENGIYSV TFTLLSGPSR RFKRVVETIQ AQLLSTHDPP AAQHLSEPPP PAPGLSWGAG 660
661  LKGQKVATSY ESSL                                                   720
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blue: BRSK2 sequence expressed in recombinant protein

[1]NCBI/Protein accession number NP_001243558.