

## ProQinase™ ERK2 (non activated)

mitogen-activated protein kinase 1

Recombinant Human Protein Kinase

HGNC Symbol: MAPK1

**Synonyms:** PRKM2, PRKM1, ERK, MAPK2, p41MAPK

**Product No.:** 0634-0000-1

**Lot:** 005

**Description:** Human ERK2, full length, amino acids M<sub>1</sub>-S<sub>360</sub> (as in [NCBI/Protein](#) entry NP\_002736.3), not activated, untagged, expressed in E.coli

**Product identity:** ERK2 Lot 005, was confirmed as ERK2 by specific western blotting

**Theoretical MW<sub>Fusion Protein</sub>:** 41,762 Da

**Expression host:** E.coli

**Purification:** GST-Affinity Chromatography

**Activation:** This kinase was not activated by special procedures

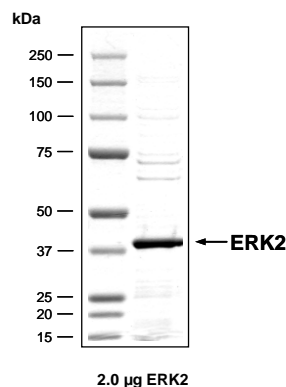
**Storage buffer:** 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 20 % glycerol

**Storage temperature:** -80°C

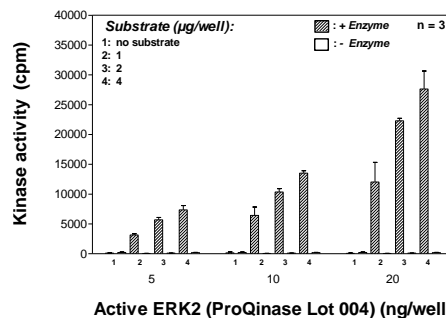
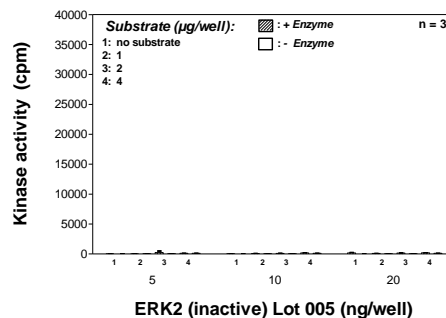
For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

**Protein concentration:** 0.137 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

### ERK2 Lot 005: Coomassie stain



### Kinase activity ERK2 (inactive) vs active ERK2:



#### 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>
- 1 µM ATP (610,000 cpm <sup>32</sup>P-γ-ATP)
- Substrate (variable): RB-CTF
- Recombinant ERK2 (inactive) or active ERK2 (variable concentrations)

Assay: <sup>32</sup>PanQinase® Assay

## ProQinase™ ERK2 (non activated)

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| ERK2 Recombinant Fusion Protein Amino Acid Sequence |            |            |            |            |            |            |     |
|---|------------|------------|------------|------------|------------|------------|-----|
| 1   | GPLAMAAAAA | AGAGPEMVRG | QVFDVGPRT  | NLSYIGEGAY | GMVCSAYDNV | NKVRVAIKKI | 60  |
| 61  | SPFEHQTYCQ | RTLREIKILL | RFRHENIIGI | NDIIRAPTIE | QMKDVYIVQD | LMETDLYKLL | 120 |
| 121   | KTQHLSNDHI | CYFLYQILRG | LKYIHSANVL | HRDLKPSNLL | LNTTCDLKIC | DFGLARVADP | 180 |
| 181   | DHDHTGFLTE | YVATRWRAP  | EIMLNSKGYT | KSIDIWSVGC | ILAEMLSNRP | IFPGKHYLDQ | 240 |
| 241   | LNHILGILGS | PSQEDLNCII | NLKARNYLLS | LPHKNKVPWN | RLFPNADSKA | LDLLDKMLTF | 300 |
| 301   | NPHKRIEVEQ | ALAHPLYEQY | YDPSDEPIAE | APFKFDMELD | DLPKEKLEL  | IFEETARFQP | 360 |
| 361   | GYRS       |            |            |            |            |            | 420 |

1-4: legacy of tag cleavage blue: ERK2

| ERK2 wt <sup>1</sup> Amino Acid Sequence |            |            |            |            |            |            |     |
|--|------------|------------|------------|------------|------------|------------|-----|
| 1  | MAAAAAGAG  | PEMVRGQVFD | VGPRTNLSY  | IGEGAYGMVC | SAYDNVNKVR | VAIKKISPFE | 60  |
| 61                                       | HQTYCQRTL  | EIKILLRFRH | ENIIGINDII | RAPTIEQMKD | VYIVQDLMET | DLYKLLKTQH | 120 |
| 121                                      | LSNDHICYFL | YQILRGLKYI | HSANVLHRDL | KPSNLLNTT  | CDLKICDFGL | ARVADPDHHD | 180 |
| 181                                      | TGFLTEYVAT | RWYRAPEIML | NSKGYTKSID | IWSVGCILAE | MLSNRPIFPG | KHYLDQLNHI | 240 |
| 241                                      | LGILGSPSQE | DLNCIINLKA | RNYLLSLPHK | NKVPWNRLFP | NADSKALDLL | DKMLTFNPHK | 300 |
| 301                                      | RIEVEQALAH | PLYEQYDPS  | DEPIAEAPFK | FDMELDDLPK | EKLKELIFEE | TARFQPGYRS | 360 |

blue: ERK2 sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](https://www.ncbi.nlm.nih.gov/Protein) accession number NP\_002736.3