

Product datasheet for **RG210493**

ERK2 (MAPK1) (NM_002745) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ERK2 (MAPK1) (NM_002745) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ERK2
Synonyms:	ERK; ERK-2; ERK2; ERT1; MAPK2; NS13; p38; p40; p41; p41mapk; p42-MAPK; P42MAPK; PRKM1; PRKM2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG210493 representing NM_002745 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGGCGGCGGGCGGGCGGGCCCGGAGATGGTCCGCGGGCAGGTGTTGACGTGGGCGCG
GCTACACCAACCTCTCGTACATCGGCGAGGGCGCCTACGGCATGGTGTGCTCTGCTTATGATAATGTCAA
CAAAGTTCGAGTAGCTATCAAGAAAATCAGCCCCTTTGAGCACCAGACCTACTGCCAGAGAACCCTGAGG
GAGATAAAAATCTTACTGCGCTTCAGACATGAGAACATCATTGGAATCAATGACATTATTCGAGCACCAA
CCATCGAGCAAAATGAAAGATGTATATAGTACAGGACCTCATGGAAACAGATCTTTACAAGCTCTTGAA
GACACAACACCTCAGCAATGACCATATCTGCTATTTCTCTACCAGATCCTCAGAGGGTTAAAATATATC
CATTTCAGCTAACGTTCTGCACCGTGACCTCAAGCCTTCCAACCTGCTGCTCAACACCACCTGTGATCTCA
AGATCTGTGACTTTGGCCTGGCCCGTGTTCAGATCCAGACCATGATCACACAGGGTTCCTGACAGAATA
TGTGGCCACACGTTGGTACAGGGCTCCAGAAATTATGTTGAATCCAAGGGCTACACCAAGTCCATTGAT
ATTTGGTCTGTAGGCTGCATTCTGGCAGAAATGCTTTCTAACAGGCCATCTTTCCAGGGAAGCATTATC
TTGACCAGCTGAACCACATTTTGGGATTTCTTGGATCCCATCACAAGAAGACCTGAATTGTATAATAAA
TTTAAAAGCTAGGAACTATTTGCTTTCTTCCACACAAAATAGGTGCCATGGAACAGGCTGTCCCCA
AATGCTGACTCCAAAGCTCTGGACTTATGGACAAAATGTTGACATTCAACCCACACAAGAGGATTGAAG
TAGAACAGGCTCTGGCCACCCATATCTGGAGCAGTATTACGACCCGAGTGACGAGCCCATCGCCGAAGC
ACCATTCAGTTCGACATGGAATTGGATGACTTGCCTAAGGAAAAGCTCAAAGAATAATTTTGAAGAG
ACTGCTAGATTCCAGCCAGGATACAGATCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG210493 representing NM_002745
 Red=Cloning site Green=Tags(s)

MAAAAAAGAGPEMVRGQVFDVGPRTYNTLSYIGEGAYGMVCSAYDNVNKVRVAIKKISPFHEHQTYCQRTLREIKILLRFRHENIIGINDIIRAPTIEQMKDVYIVQDLMETDLYKLLKTQHLSDNHICYFLYQILRGLKYIHSANVLRDLKPSNLLLNTTCDLKICDFGLARVADPDHDHTGFLTEYVATRWRAPPEIMLSKGYTKSIDIWSVGCILAEMLSNRPIFPKHYLDQLNHILGILGSPSQEDLNCIINLKARNYLLSLPHKNKVPWNRLFPNADSKALDLDLDMKMLTFNPHKRIEVEQALAHPLYEQYYDPSEPIAEAPFKFDMELDDLPEKELKELIFEE TARFQPGYRS

TRTRPLE - GFP Tag - V

Chromatograms: https://cdn.origene.com/chromatograms/ja3411_e04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002745

ORF Size: 1080 bp

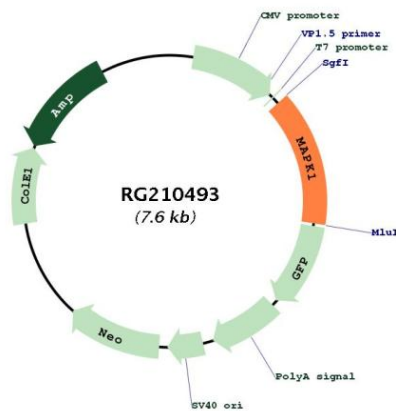
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_002745.5
RefSeq Size:	5916 bp
RefSeq ORF:	1083 bp
Locus ID:	5594
UniProt ID:	P28482
Cytogenetics:	22q11.22
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Acute myeloid leukemia, Adherens junction, Alzheimer's disease, Axon guidance, B cell receptor signaling pathway, Bladder cancer, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Dorso-ventral axis formation, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Gap junction, Glioma, GnRH signaling pathway, Insulin signaling pathway, Long-term depression, Long-term potentiation, MAPK signaling pathway, Melanogenesis, Melanoma, mTOR signaling pathway, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, NOD-like receptor signaling pathway, Non-small cell lung cancer, Oocyte meiosis, Pancreatic cancer, Pathways in cancer, Prion diseases, Progesterone-mediated oocyte maturation, Prostate cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway, TGF-beta signaling pathway, Thyroid cancer, Toll-like receptor signaling pathway, Type II diabetes mellitus, Vascular smooth muscle contraction, VEGF signaling pathway

Gene Summary:

This gene encodes a member of the MAP kinase family. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. The activation of this kinase requires its phosphorylation by upstream kinases. Upon activation, this kinase translocates to the nucleus of the stimulated cells, where it phosphorylates nuclear targets. One study also suggests that this protein acts as a transcriptional repressor independent of its kinase activity. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Two alternatively spliced transcript variants encoding the same protein, but differing in the UTRs, have been reported for this gene. [provided by RefSeq, Jan 2014]

Product images:


Circular map for RG210493