

## Product datasheet for **RG204196**

### ERK1 (MAPK3) (NM\_002746) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ERK1 (MAPK3) (NM_002746) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ERK1
Synonyms:	ERK-1; ERK1; ERT2; HS44KDAP; HUMKER1A; p44-ERK1; p44-MAPK; P44ERK1; P44MAPK; PRKM3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG204196 representing NM_002746 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**C

ATGGCGCGCGCGCGCTCAGGGGGCGGGGGCGGGGAGCCCCGTAGAACCAGGGGGTTCGGCCCGGGG  
TCCCGGGGAGGTGGAGATGGTGAAGGGGACGCCGTTTCGACGTGGGCCCGCGCTACACGCAGTTGCAGTA  
CATCGGCGAGGGCGCGTACGGCATGGTCAGCTCGGCCTATGACCACGTGCGCAAGACTCGCGTGGCCATC  
AAGAAGATCAGCCCTTGAACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGC  
GCTTCCGCATGAGAATGTCATCGGCATCCGAGACATTCTGCGGGCGTCCACCCTGGAAGCCATGAGAGA  
TGCTACATTGTGACAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGCAGCTGAGCAAT  
GACCATATCTGCTACTTCTCTACCAGATCCTGCGGGGCCTCAAGTACATCCACTCCGCCAACGTGCTCC  
ACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCACCTGCGACCTTAAGATTTGTGATTTCCGGCT  
GGCCCGGATTGCCGATCCTGAGCATGACCACACCGGCTTCTGACGGAGTATGTGGCTACGCGCTGGTAC  
CGGGCCCCAGAGATCATGCTGAACCTCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCA  
TTCTGGCTGAGATGCTCTAACC GGCCATCTTCCCTGGCAAGCACTACCTGGATCAGTCAACCACAT  
TCTGGGATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGGCCCGAAACTAC  
CTACAGTCTTGCCTCCAAGACCAAGGTGGCTTGGCCAAGCTTTTCCCAAGTCAAGTCCAAAGCCC  
TTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATAAACGGATCACAGTGGAGGAAGCGCTGGCTCA  
CCCCTACCTGGAGCAGTACTATGACCCGACGGATGAGCCAGTGGCCGAGGAGCCCTTACCTTCCGCATG  
GAGCTGGATGACCTACCTAAGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCC  
GAGTGCTGGAGGCCCC

**ACCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG204196 representing NM\_002746  
 Red=Cloning site Green=Tags(s)

MAAAAAQGGGGEPRTTEGVGPGVPGVEVMVKGQPFVDVGPRTYQLQYIGEGAYGMVSSAYDHRKTRVAI  
 KKISPFHQTYCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYIVQDLMETDLKLLKSQQLSN  
 DHICYFLYQILRGLKYIHSANVLRDLKPSNLLINTTCDLKICDFGLARIADPEHDHTGFLTEYVATRWY  
 RAPEIMLSKGYTKSIDIWSVGCILAEMLSNRPIFPKGHYLDQLNHILGILGSPSQEDLNCIINMKARNY  
 LQSLPSKTKVAWAKLFPKSDSKALDLLDRMLTFNPNKRITVEEALAHPPYLEQYYDPTDEPVAEFPFTFAM  
 ELDDLPKERLKELIFQETARFQPGVLEAP

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_002746

**ORF Size:** 1137 bp

**OTI Disclaimer:** 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:**

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\\_002746.3](#)

**RefSeq Size:** 1866 bp

**RefSeq ORF:** 1140 bp

**Locus ID:** 5595

**UniProt ID:** [P27361](#)

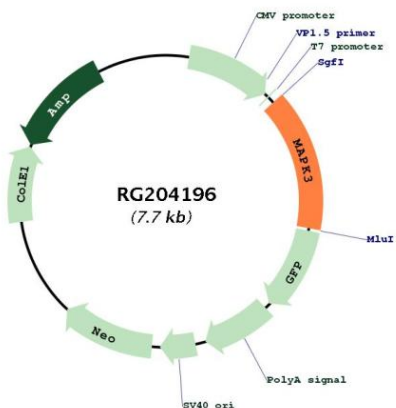
**Cytogenetics:** 16p11.2

**Protein Families:** Druggable Genome, ES Cell Differentiation/IPS, 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:** The protein encoded by this gene is a member of the MAP kinase family. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act in a signaling cascade that regulates various cellular processes such as proliferation, differentiation, and cell cycle progression in response to a variety of extracellular signals. This kinase is activated by upstream kinases, resulting in its translocation to the nucleus where it phosphorylates nuclear targets. Alternatively spliced transcript variants encoding different protein isoforms have been described. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG204196