

## Product datasheet for **RG219888**

### ERK1 (MAPK3) (NM\_001040056) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ERK1 (MAPK3) (NM_001040056) 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:	>RG219888 representing NM_001040056 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGCGCGGGCGGCTCAGGGGGGGGGGGGGAGCCCCGTAGAACCAGGGGGTTCGGCCCGGGG  
TCCCGGGGAGGTGGAGATGGTGAAGGGGACGCCGTTTCGACGTGGGCCCGCTACACGCAGTTGCAGTA  
CATCGGCGAGGGCGGTACGGCATGGTCAGCTCGGCCTATGACCACGTGCGCAAGACTCGCGTGGCCATC  
AAGAAGATCAGCCCTTGAACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGC  
GCTTCCGCATGAGAATGTCATCGGCATCCGAGACATTCTGCGGGCGTCCACCCTGGAAGCCATGAGAGA  
TGCTACATTGTGACAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGCAGCTGAGCAAT  
GACCATATCTGCTACTTCTCTACCAGATCCTGCGGGGCCTCAAGTACATCCACTCCGCCAACGTGCTCC  
ACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCACCTGCGACCTTAAGATTTGTGATTTCCGGCT  
GGCCCGGATTGCCGATCCTGAGCATGACCACACCGGCTTCTGACGGAGTATGTGGCTACGCGCTGGTAC  
CGGGCCCCAGAGATCATGCTGAACCTCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCA  
TTCTGGCTGAGATGCTCTTAACCGGCCATCTTCCCTGGCAAGCACTACCTGGATCAGTCAACCACAT  
TCTGGCATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGGCCCGAACTAC  
CTACAGTCTTGCCTCCAAGACCAAGTGGCTTGGCCAAGCTTTTCCCAAGTCAGACTCCAAGGCC  
TTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATAAACGGATCACAGTGGAGGAAGCGCTGGCTCA  
CCCCTACCTGGAGCAGTACTATGACCCGACGGATGAGGTGGGCCAGTCCCCAGCAGCAGTGGGGCTGGG  
GCAGGGGAGCAGGGGGCACG

**ACGGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG219888 representing NM\_001040056  
 Red=Cloning site Green=Tags(s)

MAAAAAQGGGGGEP RRT EGVGPGV PGEVEMVKGQPF DVGPRYTQLQYIGEGAYGMVSSAYDHVRKTRVAI  
 KKISPFHQTYCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYIVQDLMETDLYKLLKSQQLSN  
 DHICYFLYQILRGLKYIHSANVLRDLKPSNLLINTTCDLKICDFGLARIADPEHDHTGFLT EYVATRWY  
 RAPEIMLNSKGYTKSIDIWSVGCILAEMLSNRPIFPKGHYLDQLNHILGILGSPSQEDLNCIINMKARNY  
 LQSLPSKTKVAWAKLFPKSDSKALDLLDRMLTFNPNKRITVEEALAHPLYEQYYDPTDEVGQSPAAVGLG  
 AGEQGGT

TRTRPLE - GFP Tag - V

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja2732\\_c12.zip](https://cdn.origene.com/chromatograms/ja2732_c12.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001040056

**ORF Size:** 1071 bp

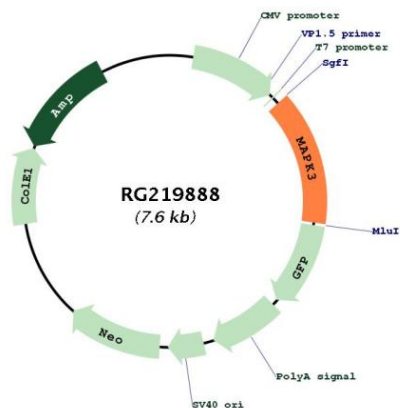
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001040056.3</a>
<b>RefSeq Size:</b>	2005 bp
<b>RefSeq ORF:</b>	1074 bp
<b>Locus ID:</b>	5595
<b>UniProt ID:</b>	<a href="#">P27361</a>
<b>Cytogenetics:</b>	16p11.2
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase
<b>Protein Pathways:</b>	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
<b>Gene Summary:</b>	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 RG219888