

Product datasheet for **SC317070**

ERK1 (MAPK3) (NM_001109891) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ERK1 (MAPK3) (NM_001109891) Human Untagged Clone
Tag:	Tag Free
Symbol:	ERK1
Synonyms:	ERK-1; ERK1; ERT2; HS44KDAP; HUMKER1A; p44-ERK1; p44-MAPK; P44ERK1; P44MAPK; PRKM3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001109891, the custom clone sequence may differ by one or more nucleotides

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ATGGCGGCGGCGGCGGCTCAGGGGGCGGGGGCGGGGAGCCCCGTAGAACCAGGGGGTTCGGCCCCGGGG
TCCCGGGGAGGTGGAGATGGTGAAGGGGCGCCGTTTCGACGTGGGCCCGCGCTACACGCAGTTGCAGTA
CATCGGCGAGGGCGCGTACGGCATGGTCAGCTCGGCCTATGACCACGTGCGCAAGACTCGCGTGGCCATC
AAGAAGATCAGCCCCTTCGAACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGC
GTTCCGCCATGAGAATGTCATCGGCATCCGAGACATTCTCGGGCGTCCACCCTGGAAGCCATGAGAGA
TGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGCAGCTGAGCAAT
GACCATATCTGCTACTTCTCTACCAGATCCTGCGGGGCCTCAAGTACATCCACTCGCCAACGTGCTCC
ACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCACCTGCGACCTTAAGATTTGTGATTTCCGGCT
GGCCCGGATTGCCGATCCTGAGCATGACCACACCGGCTTCTGACGGAGTATGTGGCTACGCGCTGGTAC
CGGGCCCCAGAGATCATGCTGAACCTCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCA
TTCTGGCTGAGATGCTCTTAACCGGCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACAT
TCTGGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATAACGGATCACAGTGGAGGAAGCG
CTGGCTCACCCCTACCTGGAGCAGTACTATGACCCGACGGATGAGCCAGTGGCCGAGGAGCCCTTACCT
TCGCCATGGAGCTGGATGACCTACCTAAGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTT
CCAGCCCGGAGTGTGGAGGCCCCCTAG
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Restriction Sites:	Please inquire
ACCN:	NM_001109891



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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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_001109891.1](#), [NP_001103361.1](#)

RefSeq Size: 1770 bp

RefSeq ORF: 1008 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]

Transcript Variant: This variant (3) lacks an in-frame exon in the 3' coding region, compared to variant 1. This results in a shorter protein (isoform 3), compared to isoform 1.