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# Product datasheet for RC224657

## MATK (NM_002378) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | MATK (NM_002378) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | MATK |
| **Synonyms:** | CHK; CTK; HHYLTK; HYL; HYLTK; Lsk |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

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**ORF Nucleotide Sequence:**

>RC224657 representing NM_002378
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAGGGACATTTCCCTGCTGAACGAAGAGAAGGCAGACCTCGGCGAGGGACCCGTGGTCAGCAGCAGC
TTCTGGTGAGCCCCCGCTTCCTCCGAGCCTGGCACCCCCCTCCCGTCTCAGCCAGGATGCCAACGAGGCG
CTGGGCCCCGGGCACCCAGTGTATCACCAAATGCGAGCACACCCGCCCCAAGCCAGGGGAGCTGGCCTTC
CGCAAGGGCGACGTGGTCACCATCCTGGAGGCCTGCGAGAACAAGAGCTGGTACCGCGTCAAGCACCACA
CCAGTGGACAGGAGGGGCTGCTGGCAGCTGGGGCGCTGCGGGAGCGGGAGGCCCTCTCCGCAGACCCCAA
GCTCAGCCTCATGCCGTGGTTCCACGGGAAGATCTCGGGCCAGGAGGCTGTCCAGCAGCTGCAGCCTCCC
GAGGATGGGCTGTTCCTGGTGCGGGAGTCCGCGCGCCACCCCGGCGACTACGTCCTGTGCGTGAGCTTTG
GCCGCGACGTCATCCACTACCGCGTGCTGCACCGCGACGGCCACCTCACAATCGATGAGGCCGTGTTCTT
CTGCAACCTCATGGACATGGTGGAGCATTACAGCAAGGACAAGGGCGCTATCTGCACCAAGCTGGTGAGA
CCAAAGCGGAAACACGGGACCAAGTCGGCCGAGGAGGAGCTGGCCAGGGCGGGCTGGTTACTGAACCTGC
AGCATTTGACATTGGGAGCACAGATCGGAGAGGGAGAGTTTGGAGCTGTCCTGCAGGGTGAGTACCTGGG
GCAAAAGGTGGCCGTGAAGAATATCAAGTGTGATGTGACAGCCCAGGCCTTCCTGGACGAGACGGCCGTC
ATGACGAAGATGCAACACGAGAACCTGGTGCGTCTCCTGGGCGTGATCCTGCACCAGGGGCTGTACATTG
TCATGGAGCACGTGAGCAAGGGCAACCTGGTGAACTTTCTGCGGACCCGGGGTCGAGCCCTCGTGAACAC
CGCTCAGCTCCTGCAGTTTTCTCTGCACGTGGCCGAGGGCATGGAGTACCTGGAGAGCAAGAAGCTTGTG
CACCGCGACCTGGCCGCCCGCAACATCCTGGTCTCAGAGGACCTGGTGGCCAAGGTCAGCGACTTTGGCC
TGGCCAAAGCCGAGCGGAAGGGGCTAGACTCAAGCCGGCTGCCCGTCAAGTGGACGGCGCCCGAGGCTCT
CAAACACGGGAAGTTCACCAGCAAGTCGGATGTCTGGAGTTTTGGGGTGCTGCTCTGGGAGGTCTTCTCA
TATGGACGGGCTCCGTACCCTAAAATGTCACTGAAAGAGGTGTCGGAGGCCGTGGAGAAGGGGTACCGCA
TGGAACCCCCCGAGGGCTGTCCAGGCCCCGTGCACGTCCTCATGAGCAGCTGCTGGGAGGCAGAGCCCGC
CCGCCGGCCACCCTTCCGCAAACTGGCCGAGAAGCTGGCCCGGGAGCTACGCAGTGCAGGTGCCCCAGCC
TCCGTCTCAGGGCAGGACGCCGACGGCTCCACCTCGCCCCGAAGCCAGGAGCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC224657 representing NM_002378
Red=Cloning site Green=Tags(s)

MQGHFPAERREGRPRRGTRGQQQLLVSPRFLRAWHPPPVSARMPTRRWAPGTQCITKCEHTRPKPGELAF
RKGDVVTILEACENKSWYRVKHHTSGQEGLLAAGALREREALSADPKLSLMPWFHGKISGQEAVQQLQPP
EDGLFLVRESARHPGDYVLCVSFGRDVIHYRVLHRDGHLTIDEAVFFCNLMDMVEHYSKDKGAICTKLVR
PKRKHGTKSAEEELARAGWLLNLQHLTLGAQIGEGEFGAVLQGEYLGQKVAVKNIKCDVTAQAFLDETAV
MTKMQHENLVRLLGVILHQGLYIVMEHVSKGNLVNFLRTRGRALVNTAQLLQFSLHVAEGMEYLESKKLV
HRDLAARNILVSEDLVAKVSDFGLAKAERKGLDSSRLPVKWTAPEALKHGKFTSKSDVWSFGVLLWEVFS
YGRAPYPKMSLKEVSEAVEKGYRMEPPEGCPGPVHVLMSSCWEAEPARRPPFRKLAEKLARELRSAGAPA
SVSGQDADGSTSPRSQEP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk8064_b10.zip

**Restriction Sites:** SgfI-MluI

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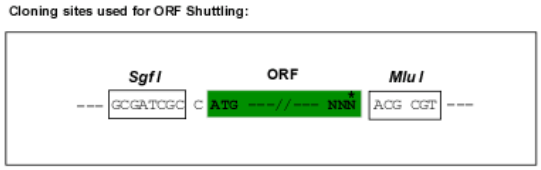
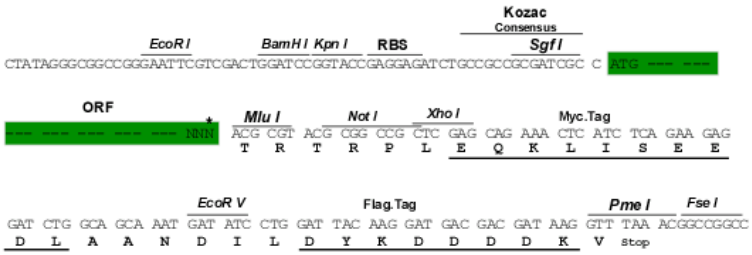
**Cloning Scheme:**




* The last codon before the Stop codon of the ORF

**ACCN:** NM_002378

**ORF Size:** 1524 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** NM_002378.4

**RefSeq Size:** 2104 bp

**RefSeq ORF:** 1527 bp

**Locus ID:** 4145

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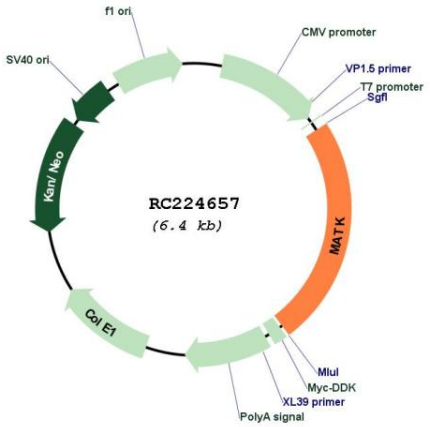
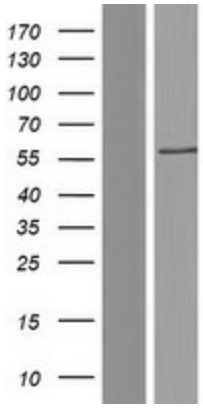
| | |
|---|---|
| **UniProt ID:** | P42679 |
| **Cytogenetics:** | 19p13.3 |
| **Protein Families:** | Druggable Genome, Protein Kinase, Stem cell - Pluripotency |
| **MW:** | 56.6 kDa |
| **Gene Summary:** | The protein encoded by this gene has amino acid sequence similarity to Csk tyrosine kinase and has the structural features of the CSK subfamily: SRC homology SH2 and SH3 domains, a catalytic domain, a unique N terminus, lack of myristylation signals, lack of a negative regulatory phosphorylation site, and lack of an autophosphorylation site. This protein is thought to play a significant role in the signal transduction of hematopoietic cells. It is able to phosphorylate and inactivate Src family kinases, and may play an inhibitory role in the control of T-cell proliferation. This protein might be involved in signaling in some cases of breast cancer. Three alternatively spliced transcript variants that encode different isoforms have been described for this gene. [provided by RefSeq, Jul 2008] |

## Product images:




Circular map for RC224657




Western blot validation of overexpression lysate (Cat# [LY419363]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224657 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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