

Product datasheet for RC223650

LATS1 (NM_004690) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: LATS1 (NM_004690) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: LATS1
Synonyms: WARTS; wts
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC223650 representing NM_004690
 Red=Cloning site Blue=ORF Green=Tags(s)

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 GCC**CGATCGCC**

ATGAAGAGGAGTGAAAAGCCAGAAGGATATAGACAAATGAGGCCTAAGACCTTTCCTGCCAGTAACTATA
 CTGTCAGTAGCCGCAAAATGTTACAAGAAATTCGGGAATCCCTTAGGAATTTATCTAAACCATCTGATGC
 TGCTAAGGCTGAGCATAACATGAGTAAATGTCAACCGAAGATCCTCGACAAGTCAGAAATCCACCCAAA
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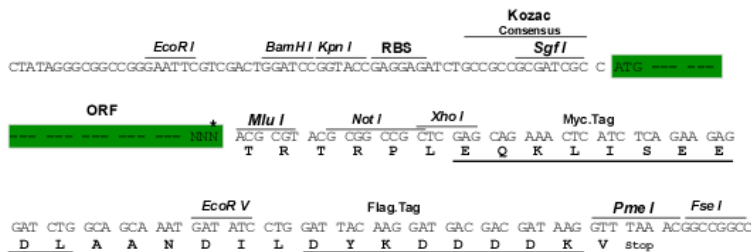
Protein Sequence: >RC223650 representing NM_004690
 Red=Cloning site Green=Tags(s)

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 FGTHHKALQEIRNSLLPFANETNSRSTSEVNPQMLQDLQAAGFDEDMVIQALQKTNNRSIEAAIEFISK
 MSYQDPRREQMAAAAARPINASMKPGNVQQSVNRKQSWKGSKESLVPQRHGPPLGESVAYHSESPNSQTD
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 LYNISVPLQTNWPQSSSAPAQSSPSSGHEIPTWQPNIPVRSNSFNPLGNRASHANSQPSATTVTAIT
 PAPIQQPVKSMRVLKPELQALAPTHPSWIPQPIQTVQSPFPEGASNVTVMPVAAEPNYQGPPPPYP
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 DKSMFVKIKTLGIGAFGEVCLARKVDTKALYATKTLRKKDVLRLNQVAHVKAERDILAEADNEWVRLYY
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 HIKLTDGLCTGFRWTHDSKYYSQGDHPRQDSMDFSNWGDPSRCRCGRDLKPLERRAARQHQRCLAHSL
 VGTPNYIAPEVLLRTGYTQLCDWWSVGVILFEMLVGQPPFLAQTPLETQMKVINWQTSLHIPPQAKLSPE
 ASDLI IKLCRGPEDRLGKNGADEIKAHPPFKTIDFSSDLRQQSASYIPKITHPTDTSNFDVDPDKLWSD
 DNEEENVNDTLNGWYKNGKHPEHAFYEFTRRRFFDDNGYPYNYPKPIEYIYINSQGSEQQSDEDDQNTGS
 EIKNRDLVYV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI
 Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_004690

ORF Size: 3390 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:

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_004690.4](#)

RefSeq Size: 4756 bp

RefSeq ORF: 3393 bp

Locus ID: 9113

UniProt ID: [O95835](#)

Cytogenetics: 6q25.1

Domains: UBA, pkinase

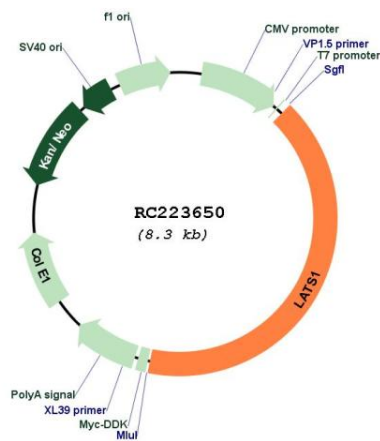
Protein Families: Druggable Genome, Protein Kinase

MW: 126.7 kDa

Gene Summary:

The protein encoded by this gene is a putative serine/threonine kinase that localizes to the mitotic apparatus and complexes with cell cycle controller CDC2 kinase in early mitosis. The protein is phosphorylated in a cell-cycle dependent manner, with late prophase phosphorylation remaining through metaphase. The N-terminal region of the protein binds CDC2 to form a complex showing reduced H1 histone kinase activity, indicating a role as a negative regulator of CDC2/cyclin A. In addition, the C-terminal kinase domain binds to its own N-terminal region, suggesting potential negative regulation through interference with complex formation via intramolecular binding. Biochemical and genetic data suggest a role as a tumor suppressor. This is supported by studies in knockout mice showing development of soft-tissue sarcomas, ovarian stromal cell tumors and a high sensitivity to carcinogenic treatments. [provided by RefSeq, Apr 2017]

Product images:



Circular map for RC223650