

## Product datasheet for **RG223650**

### LATS1 (NM\_004690) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	LATS1 (NM_004690) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	LATS1
Synonyms:	WARTS; wts
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG223650 representing NM\_004690  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAAGAGGAGTGAAAAGCCAGAAGGATATAGACAAATGAGGCCTAAGACCTTCTGCCAGTAACTATA  
 CTGTCAGTAGCCGCAAATGTTACAAGAAATTCGGGAATCCCTTAGGAATTTATCTAAACCATCTGATGC  
 TGCTAAGGCTGAGCATAACATGAGTAAATGTCAACCGAAGATCCTCGACAAGTCAGAAATCCACCCAAA  
 TTTGGGACGCATCATAAAGCCTTGCAGGAAATCGAAACTCTCTGCTTCCATTTGCAAATGAAACAAATT  
 CTTCTCGGAGTACTTCAGAAGTTAATCCACAAATGCTTCAAGACTTGCAAGCTGCTGGATTTGATGAGGA  
 TATGGTTATAACAAGCTCTCAGAAAATAACAACAGAAGTATAGAAGCAGCAATTGAATTCATTAGTAAA  
 ATGAGTTACCAAGATCCTCGACGAGAGCAGATGGCTGCAGCAGCTGCCAGACCTATTAATGCCAGCATGA  
 AACCAGGGAATGTGCAGCAATCAGTTAACCGBAAACAGAGCTGAAAGGTTCTAAAGAATCCTTAGTTCC  
 TCAGAGGCATGGCCCGCCACTAGGAGAAAGTGTGGCCTATCATTCTGAGAGTCCCAACTCACAGACAGAT  
 GTAGGAAGACCTTTGCTGGATCTGGTATATCAGCATTGTTCAAGCTCACCTAGCAACGGACAGAGAG  
 TGAACCCCCACCACCACCTCAAGTAAGGAGTGTTACTCTCCACCACCTCCAAGAGGCCAGACTCCCC  
 TCCAAGAGGTACAACCTCCACCTCCCCCTTCATGGGAACCAAACCTCTAAACAAAGCGCTATTCTGAAAA  
 ATGGAATACGTAATCTCCCGAATCTCTCTGTCCACCTGGGCGATGGCAAGAGGGCTATCTCCACCAC  
 CTCTCAACACTTCCCCATGAATCTCTAATCAAGGACAGAGAGGCATTAGTTCTGTTCTGTTGGCAG  
 ACAACCAATCATCATGCAGAGTTCTAGCAAATTAACCTTCCATCAGGGAGACCTGGAATGCAGAATGGT  
 ACTGGACAAACTGATTTTCATGATACACCAAAATGTTGCCCTGCTGGCACTGTGAATCGGCAGCCACCAC  
 CTCCATATCCTCTGACAGCAGCTAATGGACAAAGCCCTTCTGCTTACAACAGGGGGATCTGCTGCTCC  
 TTCGTCATATACAAATGGAAGTATTCTCAGTCTATGATGGTGCCAAACAGAAATAGTCATAACATGGAA  
 CTATATAACATTAGTGTACCTGGACTGCAAAACAATTGGCCTCAGTCATCTTCTGCTCCAGCCAGTCAT  
 CCCCAGCAGTGGGCATGAAATCCCTACATGGCAACCTAACATACCAGTGAGGTCAAATCTTTTAAATA  
 CCCATTAGGAAATAGAGCAAGTCACTCTGCTAATTCTCAGCCTCCGCTACAACAGTCACTGCAATTACA  
 CCAGCTCCTATTCAACAGCCTGTGAAAAGTATGCGTGTATTAACCAGAGCTACAGACTGCTTTAGCAC  
 CTACACACCCTTCTGGATACCACAGCCAATCAAACCTGTTCAACCCAGTCTTTTCTGAGGGAACCGC  
 TTCAAATGTGACTGTGATGCCACCTGTTGCTGAAGCTCCAAACTATCAAGGACCACCACCACCTACCCA  
 AAACATCTGCTGCACAAAACCCATCTGTTCTCCATACGAGTCAATCAGTAAGCCTAGCAAAGAGGATC  
 AGCCAAGCTTGCCAAGGAAGATGAGAGTGAAAAGAGTTATGAAAATGTTGATAGTGGGGATAAAGAAAA  
 GAAACAGATTACAACCTCACCTATTACTGTTAGAAAAACAAGAAAGATGAAGAGCGAAGGGAATCTCGT  
 ATTCAAAGTTATTCTCTCAAGCATTAAATCTTTATGGAGCAACATGTAGAAAATGTAICTCAAATCTC  
 ATCAGCAGCGTCTACATCGTAAAAACAATTAGAGAATGAAATGATGCGGCTGATT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG223650 representing NM\_004690  
 Red=Cloning site Green=Tags(s)

MKRSEKPEGYRQMRPKTFPASNYTVSSRQMLQEIRESLRNL SKPSDAAKAEHNMSKMSTEDPRQVRNPPK  
 FGTHHKALQEIRNSLLPFANETNSRSTSEVNPQMLQDLQAAGFDEDMVIQALQKTNNSIEAAIEFISK  
 MSYQDPRREQMAAAAARPINASMKPGNVQQSVNRKQSWKGSKESLVPQRHGPPLGESVAYHSESPNSQTD  
 VGRPLSGSGISAFVQAHP SNGQRVNPPPPQVRSVTPPPPPRGQTTPPPRGTTTPPPPSWEPNSQTKRYSGN  
 MEYVISRISPVPVPGAWQEGYPPPLNTSPMNPPNQGRGISSVPVGRQPIIMQSSSKFNFP SGRPGMQNG  
 TQQTDFMIHQNVVPA GTVNRQPPPPYPLTAANGQSPSALQTGGSAAPSSYTNGLIPQSMMPNRSNHNME  
 LYNISVPLQTNWPQSSSAPAQSSPSSGHEIPTWQPNIPVRSNSFNPLGNRASHSANSQPSATTVTAIT  
 PAPIQQPVKSMRVLKPELQ TALAPTHPSWIPQPIQTVQSPFPEGTASNVTMPPVAEAPNYQGPPPPYP  
 KHLLHQNPVPPYESISKPSKEDQPSLPKEDESEKSYENVDSGDKEKKQITTSPI TVRKNKKDEERRESR  
 IQSYSPQAFKFFMEQHVENVLKSHQQLHRKKQLENEMMRI

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_004690

ORF Size: 2016 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](mailto: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\\_004690.2](#), [NP\\_004681.1](#)

**RefSeq Size:** 4756 bp

**RefSeq ORF:** 3393 bp

**Locus ID:** 9113

**UniProt ID:** [O95835](#)

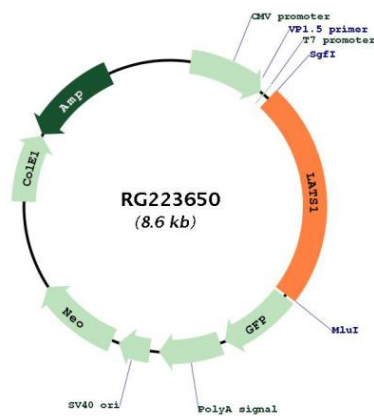
**Cytogenetics:** 6q25.1

**Domains:** UBA, pkinase

**Protein Families:** Druggable Genome, Protein Kinase

**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 RG223650