

## Product datasheet for MR211512

### Lats2 (NM\_015771) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Lats2 (NM\_015771) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Lats2  
**Synonyms:** 4932411G09Rik; AV277261; AW228608  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR211512 representing NM\_015771  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGCATCGCC

ATGAGGCCAAAGACTTTTCTGCCACAACCTACTCTGAAATAGCCGGCAGCGATTGCAAGAGATTCGAG  
 AGGGGCTGAAGCAGCCATCCAAGGCTTCCACCCAGGGGCTGTGGTGGGACCAAACAGTGACACTTCCCT  
 GGATGCCAAAGTCTGGGAGCAAAGATGCCTCCAGGCAGCAGCAATGAGAGCCACCCGAAGTTTGA  
 CCTTATCAAAAAGCTCTCAGGAAATCCGATATCCCTCTGCCTTTTGCCAACGAGTCAGGCATTCGG  
 CAGCTGCAGAGGTGAACCGGCAGATGCTTCAGGAGTTGGTGAATGCGGGATGTGACCAGGAGATGGCTGG  
 CAGAGCGCTCAAGCAGACGGGCAGTAGGAGTATCGAAGCTGCCTTGGAGTACATCAGTAAGATGGGCTAC  
 CTGGACCCAGGAATGAGCAGATTGTGCGAGTCATCAAGCAGACCTCCCCAGGAAAGGGCCTGGCGCCCA  
 CCCCAGTACTCGGCGGCCAGTTTCGAGGGCACAGGGGAAGCACTCCCATCCTACCACCAGCTGGGTGG  
 TGCAAACACGAGGGCCCGCCGACTGGAGGAGATGCCGCGCAATATTTAGACTTTCTTCCCTGGA  
 GCCGAGCCGGCACCCACGGTGCCAGGCTCACCAGCATCCTCCCAAAGGTACAGCACAGCAGTAGAGC  
 CAAGTGCACACTTCCGGGCACACACTATGGTCGTGGTCACTACTATCGGAGCAGCCTGGGTATGGGT  
 GCAGCGCAGTTCCCTCCTCCAGAACAAGACGCCACCAGATGCCTATTCAGCATGGCCAAGGCCAGGGT  
 GGCCCTCCGCGCAGCCTACCTTCTGCCCATGCTGGGCTGTACACTGCCTCGCACCAAGCCGCGCG  
 CTACCCACCTGGGGCCCAACCCATTACATGTGTTGGGCACCCGGGTCCACGTTTACTGGCGAAAGCTC  
 TGACAGGCTGTGCTGGCACCGTCCAGGAACAGCCTCAATGCTGACTTGTACGAGCTGGGCTCCACGGTG  
 CCCTGGTCTGCAGCTCCACTGGCAGCGCCGACTCGTGCAGAAGCAGGGTCTAGAAGCCTCGCGCCGC  
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 CGCCCCAACACGGTCACCGCGTGACGGCCGACACATCCTTACCCTGTGAAGAGCGTGCCTGTGCTG  
 CGGCCGAGCCCCAGACAGCCGTGGGGCCCTCGCACCCCGCTGGGTGGTGGCCACAGCACCTGCCA  
 CTGAGAGCCTGGAGACGAAGGAGGGCAGCGCAGGCCACACCCGCTGGATGTGGACTATGGCGGCTCCGA  
 GCGCAGGTGCCACCGCTCCGTACCCAAGCACTTGCTGCTGCCAGTAAGTCTGAGCAGTACAGCGTG



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GACCTGGACAGCCTGTGCACCAGTGTGCAGCAGAGTCTGCGAGGGGGCACTGAGCAAGACAGGAGTGACA  
 AGAGCCACAAAGGTGCGAAGGGAGACAAAGCTGGCAGAGACAAAAAGCAGATTGAGACCTCCCGGTGCC  
 TGTCCGCAAGAATAGCAGAGATGAAGAGAAGAGAGAGTCTCGCATCAAGAGTTACTCCCCTTATGCCTTC  
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 TGCACTGGATTGAGTGGACTCACAATCCAAGTACTACCAGAAAGGGAACCACATGAGACAGGACAGCA  
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 GAGGTGCTTCTCCGCAAAGGGTACACGCAGCTCTGTGACTGGTGGAGCGTGGTGTGATTCTTTGAGA  
 TGCTGGTTGGGCAGCCGCTTTCTTGGCCCCACCCCCACAGAGACGCAGCTGAAGGTGATCAACTGGGA  
 GAGCAGCTGCATATCCCTACGCAGGTGAGGCTCAGCGCTGAGGCCGAGACCTCATCAGGAAGCTGTGC  
 TGCGCGGTGACTGCCGCTGGGAGGGATGGGGCAGATGACCTCAAGGCACACCCGTTCTTCAACACCA  
 TCGACTTTTCCGTGACATCCGAAAGCAGCCTGCACCCTACGTCACCATCAGCCACCCCATGGACAC  
 CTCCAATTTGACCCGGTGGATGAAGAAAGCCCTGGCACGAGGCCAGCGGAGAGAGCGCCAAGGCTGG  
 GACACGCTGGCCTCCCCAGCAGCAAGCATCCAGAGCAGCCTTCTATGAGTTCACCTCCGAGGTTCT  
 TCGATGACAACGGCTATCCCTTCCGGTGCCGAAGCCCTCAGAGCCCGCAGAGAGTGCAGACCCAGGGGA  
 TGCGGACTTGAAGGTGCGGCCGAGGGCTGCCAGCCGGTGTACGTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR211512 representing NM\_015771  
 Red=Cloning site Green=Tags(s)

MRPKTFPATTYSGNSRQRLQEIREGLKQPSKASTQGLLVGPNSDTS L DAKVLGSKDASRQQMRATPKFG  
 PYQKALREIRYSLLPFANESGTSAAAENVNRQMLQELVNAGCDQEMAGRALKQTGSRSEIAALEYISKMGY  
 LDPRNEQIVRVIKQTS PGKGLAPTPVTRRPSFEGTGEALPSYHQLGGANYEGPAALEEMPRQYLDLFLPG  
 AGAGTHGAQAHQHPPKGYSTAVEPSAHFPGTHYGRGHLLESEQPGYGVQRSSSFQNKTPPDAYSMAKAQG  
 GPPASLTFPAHAGLYTASHHKPAATPPGAHPLHVLGTRGPTFTGESSAQAVLAPSRNSLNADLYELGSTV  
 PWSAAPLARRDSLQKQGLEASRPHVAFRAGPSRTNSFNPNQPEPSLPAPNTVTAVTAAHILHPVKSVRVL  
 RPEPQTAVGSPHAWVAAPTAPATESLETKESAGPHPLDVDYGGSEERRCPPPPYPKHL L LPSKSEQYSV  
 DLDSLCTSVQQSLRGGTEQDRSDKSHKGAKGDKAGRDKKQIQTSVPVPRKNSRDEEKRESRIKSYSPYAF  
 KFFMEQHVENVIKTYQQKVSRRLLQLEQEMAKAGLCEAEQEQMRKILYQKESNYNRLKRAKMDKSMFVKIK  
 TLGIGAFGEVCLACKLDTHALYAMKTLRKKDVLNRNQVAHVKAERDILAEADNEWVVKLYYFQDKDSL  
 FVMDYIPGGDMSLLIRMEVFPHELARFYIAELTLAIESVHKMGFIHRDIKPDNILDLDGHIKLTDFGL  
 CTGFRWTHNSKYQKGNHMRQDSMEPGDLWDDVSNCRCDRLKTLQRAQKQHQRC LAHSLVGTPTYIAP  
 EVLLRKGYTQLCDWWSVGVILFEMLVGQPPFLAPTPTE TQLKVINWESTLHIPTQVRLSAEARDLITKLC  
 CAADCR LGRDGADDLKAHPFFNTIDFSRDIRKQPAPYVPTISHPMDTSNFDPVDEESPWHEASGESAKAW  
 DTLASPSKHPHEAFYEF TFRRFDDNGYPFRCPKSEPAESADPGDADLEGAEEGCQPVVY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mm9009\\_b12.zip](https://cdn.origene.com/chromatograms/mm9009_b12.zip)

**Restriction Sites:**

Sgfl-Mlul

Cloning Scheme:



ACCN: NM\_015771

ORF Size: 3126 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.

RefSeq: [NM\\_015771.2](#), [NP\\_056586.2](#)

RefSeq Size: 5213 bp

RefSeq ORF: 3129 bp

Locus ID: 50523

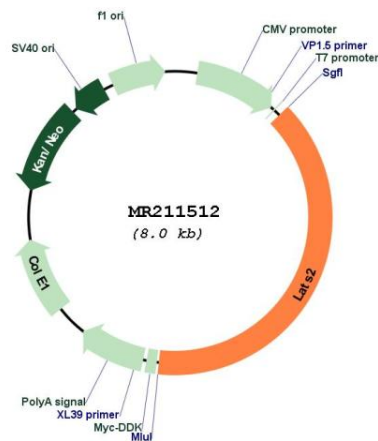
UniProt ID: [Q7TSJ6](#)

**Cytogenetics:** 14 C3

**MW:** 115.5 kDa

**Gene Summary:** Negative regulator of YAP1 in the Hippo signaling pathway that plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. The core of this pathway is composed of a kinase cascade wherein STK3/MST2 and STK4/MST1, in complex with its regulatory protein SAV1, phosphorylates and activates LATS1/2 in complex with its regulatory protein MOB1, which in turn phosphorylates and inactivates YAP1 oncoprotein and WWTR1/TAZ. Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration. Acts as a tumor suppressor which plays a critical role in centrosome duplication, maintenance of mitotic fidelity and genomic stability. Negatively regulates G1/S transition by down-regulating cyclin E/CDK2 kinase activity. Negative regulator of the androgen receptor. Phosphorylates SNAI1 in the nucleus leading to its nuclear retention and stabilization, which enhances its epithelial-mesenchymal transition and tumor cell invasion/migration activities. This tumor-promoting activity is independent of its effects upon YAP1 or WWTR1/TAZ (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR211512