

Product datasheet for **MG211512**

Lats2 (NM_015771) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lats2 (NM_015771) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Lats2
Synonyms:	4932411G09Rik; AV277261; AW228608
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG211512 representing NM_015771 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGGCCAAAGACTTTTCTGCCACAACCTACTCTGAAATAGCCGGCAGCGATTGCAAGAGATTCGAG
AGGGGCTGAAGCAGCCATCCAAGGCTTCCACCCAGGGGCTGTGGTGGGACCAAACAGTGACACTCCCT
GGATGCCAAAGTCTGGGAGCAAAGATGCCTCCAGGCAGCAGCAATGAGAGCCACCCGAAGTTTGA
CCTTATCAAAAAGCTCTCAGGAAATCCGATATCCCTCTGCCTTTTGCCAACGAGTCAGGCATTCGG
CAGCTGCAGAGGTGAACCGGCAGATGCTTCAGGAGTTGGTGAATGCGGGATGTGACCAGGAGATGGCTGG
CAGAGCGCTCAAGCAGACGGGCAGTAGGAGTATCGAAGCTGCCTTGGAGTACATCAGTAAGATGGGCTAC
CTGGACCCAGGAATGAGCAGATTGTGCGAGTCATCAAGCAGACCTCCCCAGAAAGGGCCTGGCGCCCA
CCCCGGTGACTCGGCGGCCAGTTTCGAGGGCACAGGGGAAGCACTCCCATCCTACCACCAGCTGGGTGG
TGCAAATACGAGGGCCCGCCGCACTGGAGGAGATGCCGCGCAATATTTAGACTTTCTTCCCTGGA
GCCGGAGCCGGCACCCACGGTGCCAGGCTCACCAGCATCCTCCCAAAGGTACAGCACAGCAGTAGAGC
CAAGTGCACACTTCCGGGCACACACTATGGTCGTGGTCACTACTATCGGAGCAGCCTGGGTATGGGT
GCAGCGCAGTTCCCTCCTCCAGAACAAGACGCCACCAGATGCCTATTCCAGCATGGCCAAGGCCAGGGT
GGCCCTCCGCGCAGCCTACCTTTCTGCCATGCTGGGCTGTACACTGCCTCGCACCACAAGCCGCGG
CTACCCACCTGGGGCCCAACCATTACATGTGTTGGGCACCCGGGTCCACGTTTACTGGCGAAAGCTC
TGACAGGCTGTGCTGGCACCGTCCAGGAACAGCCTCAATGCTGACTTGTACGAGCTGGGCTCCACGGTG
CCCTGGTCTGCAGCTCCACTGGCAGCCCGGACTCGTGCAGAAGCAGGGTCTAGAAGCCTCGCGCCGC
ATGTGGCTTTTCGGGCTGGCCCCAGCAGGACCAACTCCTTCAACAACCCACAACCTGAGCCCTACTGCC
CGCCCCAACACGGTCACCGCGTGACGGCCGACACATCCTTACCCTGTGAAGAGCGTGCCTGTGCTG
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GCGCAGGTGCCACCGCTCCGTACCCAAGCACTTGCTGCTGCCAGTAAGTCTGAGCAGTACAGCGTG



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GACCTGGACAGCCTGTGCACCAGTGTGCAGCAGAGTCTGCGAGGGGGCACTGAGCAAGACAGGAGTGACA
 AGAGCCACAAAGGTGCGAAGGGAGACAAAGCTGGCAGAGACAAAAAGCAGATTGAGACCTCCCGGTGCC
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 CTCCAATTTGACCCGGTGGATGAAGAAAGCCCTGGCACGAGGCCAGCGGAGAGAGCGCCAAGGCTGG
 GACACGCTGGCCTCCCCCAGCAGCAAGCATCCAGAGCAGCCTTCTATGAGTTCACCTTCCGAGGTTCT
 TCGATGACAACGGCTATCCCTTCCGGTGCCCGAAGCCCTCAGAGCCCGCAGAGAGTGCAGACCCAGGGGA
 TGCGGACTTGAAGGTGCGGCCGAGGGCTGCCAGCCGGTGTACGTG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG211512 representing NM_015771
 Red=Cloning site Green=Tags(s)

MRPKTFPATTYSNSRQRLQEIREGLKQPSKASTQGLLVGPNSDTSLEDAKVLGSKDASRQQMRATPKFG
 PYQKALREIRYSLLPFANESGTSAAAENVNRQMLQELVNAGCDQEMAGRALKQTGSRSEIAALEYISKMGY
 LDPRNEQIVRVIKQTSFGKGLAPVTRRPSFEGTGEALPSYHQLGGANYEGPAALEEMPRQYLDLFLPG
 AGAGTHGAQAHQHPKGYSTAVEPSAHFPGTHYGRGHLLESEPGYGVQRSSSFQNKTPPDAYSSMAKAQG
 GPPASLTFPAHAGLYTASHHKPAATPPGAHPLHVLGTRGPTFTGESSAQAVLAPSRNSLNADLYELGSTV
 PWSAAPLARRDSLQKQGLEASRPHVAFRAGPSRTNSFNPPQPEPSLPAPNTVTAVTAAHILHPVKSVRVL
 RPEPQTAVGSPHAWVAAPTAPATESLEKEGSAGPHPLDVDYGGSEERRCPPPPYPKHL LLPSKSEQYSV
 DLDSLCTSVQQLRGGTEQDRSDKSHKGAAGDKAGRDKKQIQTSPPVVRKNSRDEEKRESRIKSYSPYAF
 KFFMEQHVENVIKTYQQKVSRRLLQEQEMAKAGLCEAEQEQMRKILYQKESNYNRLKRAKMDKSMFVKIK
 TLGIGAFGEVCLACKLDTHALYAMKTLRKKDVLNRNQVAHVKAERDILAEADNEWVVKLYYSFQDKDSL
 FVMYIPGGDMSLLIRMEVFPEHLARFYIAELTLAIESVHKMGFIHRDIKPDNILLDLGDHKLDFGL
 CTGFRWTHNSKYQKGNHMRQDSMEPGDLWDDVSNCRGDRKLTLEQRAQKQHQRLAHSVLGTPNYIAP
 EVLLRKGYTQLCDWWSVGVILFEMLVGQPPFLAPTPTEQLKVINWESTLHIPTQVRLSAEARDLITKLC
 CAADCRLGRDGADDLKAHPFFNTIDFSRDIRKQPAPYVPTISHPMDTSNFDVDEESPWHEASGESAKAW
 DTLASPSKHPHEAFYEFTRRRFFDDNGYFRCPKPSEPAESADPGDADLEGAEEGCQPVVY

TRTRPLE – GFP Tag – V

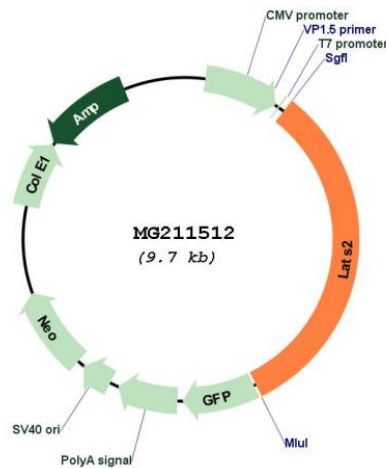
Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



Plasmid Map:



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:	<ol style="list-style-type: none">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:	Q7TSL6
Cytogenetics:	14 C3
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]