

## Product datasheet for **MG226238**

### Lats2 (NM\_153382) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Lats2 (NM\_153382) 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:** >MG226238 representing NM\_153382  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGAGGCCAAAGACTTTTCTGCCACAACCTTACTCTGAAATAGCCGGCAGCGATTGCAAGAGATTCGAG  
 AGGGGTGAAGCAGCCATCCAAGGCTTCCACCCAGGGGCTGTGGTGGGACCAAACAGTGACACTTCCCT  
 GGATGCCAAAGTCTGGGAGCAAAGATGCCTCCAGGCAGCAGCAATGAGAGCCACCCGAAGTTTGA  
 CCTTATCAAAAAGCTCTCAGGAAATCCGATATCCCTCCTGCCTTTTCCAACGAGTCAGGCACCTCGG  
 CAGCTGCAGAGGTGAACCGGCAGATGCTTCAGGAGTTGGTGAATGCGGGATGTGACCAGATGCATATTC  
 TGGTGCCTGTCTGTTTCTGGAGATGCTCCTGTCTGCCTCCCATCTCCAAACAGCAGCACCTGGATTA  
 CAGGCACACAGGCTGCTACAGCTTTCAGTGTGTGCGAATTCAAGCTCGGACCCTCACACTTGTACCTGA  
 AGCACGGAGCCAGCCGTCTTCTCAGCCCCTTATGTCCA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG226238 representing NM\_153382  
 Red=Cloning site Green=Tags(s)

MRPKTFPATTYSGNSRQLQEIREGLKQPSKASTQGLLVGPNSDTS�DAKVLGSKDASRQQMRATPKFG  
 PYQKALREIRYSLLPFANESGTSAAAENVNRQMLQELVNAGCDQMHPGACLFLEMLLSVPPISQTAAPGL  
 QAHRLQLCSVCEFKLGPShLYLKHGASRLLSPLCP

**TRTRPLE** - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

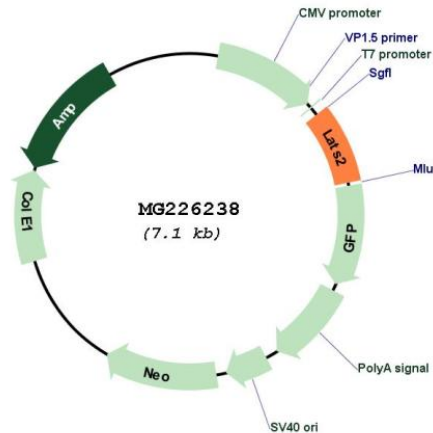


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Cloning Scheme:



Plasmid Map:



ACCN: NM\_153382

ORF Size: 528 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.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_153382.1, NP_700431.1</u>
<b>RefSeq Size:</b>	913 bp
<b>RefSeq ORF:</b>	531 bp
<b>Locus ID:</b>	50523
<b>Cytogenetics:</b>	14 C3
<b>Gene Summary:</b>	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]