

Product datasheet for **MG211003**

Mastl (NM_025979) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mastl (NM_025979) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mastl
Synonyms:	2700091H24Rik; C88295; GW; GWL; MAST-L; THC2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG211003 representing NM_025979
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGTCCGCCTCGGCAAGTGAGGAGAATGAAGGAGGTGCGGCGATAGAGGAGTGCCTGAGTAGGATCC
 CGGTACCAAGACCACCCTCCATTGAGGAGTTCACCATAGTGAAGCCATTAGCCGTGGTGCATTCGGGAA
 AGTGTACCTGGGACAGAAAGCGGCAAGTTGTACGCAGTGAAGGTTGTCAAAAAGGCAGACATGATCAAT
 AAAAATATGACTCATCAGGTACAAGCTGAGAGAGATGCCCTGGCACTGAGCAAAAAGCCCTTTTGTGTGC
 ATCTCTATTACTCACTGCAGTCAGCAAGCAACATCTACTTGATAATGGAGTATCTTATTGGTGGAGATGT
 CAAGTCTCTCCTACATATATATGGTTATTTTATGATGAAGAGATGGCTATAAAAATATATTTCTGAAGTAGCA
 TTGGCTTTAGACTACCTGCACAGACATGGAATCATCCATAGGGATTTGAAACCGGACAATATGCTTATTT
 CCAATGAGGGTCAATTAAACTGACAGATTTTGGCCTTTCCAAAGTTACTTTGAATAGAGACATCAATAT
 GATGGATATTCTACAACACCATCAATGTCTAAACCTAAGCAAGATTATCAAGAACTCCAGGACAAGTC
 TTATCTCTCATCAGTTCTTTGGGATTTTACACCAAGTTGGAGAAAAAGATCAAGACTCTGCAAACATGT
 TTTTCAGCCCTAAGTCTGCTGCACAACCTTCTCGAGGATTCATTTGTCCTATGTCTGTAGATCAGAAAGGA
 GCCGACTTCTTATTCGAGCAAATGCTAAAATCATGTTTTGAAACCCCTTCATCCAATCCAGAAATACCT
 GTGAAATGTCTGACTTCTAATCTACTCCAGTGTAGGAAAAGACTGGGTACCTCAAGTACTAGTAGCCAGT
 CTCATACCTTCGTATCCAGTGTGGAGTCAGAATGCCACAGCAATCCCAATGGGAAAAGAGACTGCCAGAG
 TACCGAATCATCAGGCTGTGCAATGAGCTGGAATGCAGTTGAAATGCTGTATGCAAAATCTACAAGTGCC
 ATCAAGACAAAAACAGAAGTGGAAATAGCACTTCTCCATTATGACAGCAGTGCCATTCCTGCTGCTG
 GAAGCAACCAGGTGACCCCTCCCTAGAAAATGCTTCAGGGAAAATCTCTGGGAAGCAAGGGACCCAGATA
 TGAGAACATGACCATTGACAAGGACAGTCTGGTTTTCTGTCAGTCCAGTCAGAGGTCTGTAAATCTAGT
 GCTACATCTGAAGAACACCTTGGTAAAAGAAATATAAAAAGAAATTTCCACTTGGTTGACTCCAGTCCTT
 GTCAGGAAATATGCAAAGTAAAAAAACTGTACAGAGTATGAGGCCAATAAGGAAAAGGCAAGGCTGCCG
 TGCAAATCAAAGTACAGGCTTGACAACCGAAGTCCAGAACCTGAAGCTATCAGGGTGTGAAAGTCAGCAA
 CTTGACTATGCCAATAAGGAGAACATTGTCACCTATTTAACTGACAGACAAACCCAGAAAAACTGCATA
 TACCAACGATAGCAAAGAACCTTATGTCTGAAGTATGAGACTGTGAGCTGAGCAGTAAAAAGGACTG
 CCTCAGTCTAATTCTGTATGTTCTGATGAGGATAGAGCTTTAAACTACCTGTGTGGATTCCGATTCA
 TCTTTTCTGGAGTGTCTATGATGGAGAGTTCAGTGGAAATTCAGGCCTTGAACAGATAAAAGCATCA
 GAGACTACTCTTTGAAGAACCAAACACTGAAGATCTATTTGTGTACCAAATGCCAAGAAAATTCCTT
 GCCACAAGATGACTGCCATGCTTGTATCCAAGACAGTAGCCAAGTGTGAGCTCATCCCTCAAAGGCGCCC
 AAAGCATTGACCTCTAAAATCAACGTCGTGGCTTTTCAAGTTTTAACAGTCATATTAACGCATCTACTA
 ATTCGGAACCATCCAAAATCAGCATAAATCTTTAGATGCTATGGACATTTCTGTGATTACAGTGGTTC
 ATACCCCATGGCTGTGAGCCCTACTGAGAAAGGAAGGCACTACACGTCACATCAGACTCCAAATCAGGTC
 AAGTTGGGAACATCATACAGAAGTCCAAAGAGTGTGAGAAGAGGGGACAGCCCAAGTAGATGACGGGCGAA
 TTCTAGGGACTCCAGATTACCTGGCACCTGAGCTCTTACTGGGTACAGCCCATGGTCTGCAGTAGACTG
 GTGGGCTCTTGGAGTTTGTCTGCAATTTCTGACAGGAATCCCTTTTCAATGATGAAACACCACAA
 CAAGTATCCAGAATATTTTAAAAAGAGATATCCCATGGCCAGAAGGCGAAGAAAAGCTATCTGATAATG
 CTCAAAGTGAATGGACATGCTTTTAAACATTGATGATTCAAAAGAGAGCTGGAATGAGAGAACTAAAA
 GCATCCTCTCTTCAAGTGGACTGGGAAAATCTGCAGCATCAGACTATGCCTTTTCGTACCCCAACCA
 GACGACGAAACAGATACATCCTATTTTGAAGCCAGAAAATATGCTCAACATCTGACCATATCTGGTTTA
 GTCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG211003 representing NM_025979
 Red=Cloning site Green=Tags(s)

MESASASEENEGGAAIEECVSRIPVPRPPSIEEFTIVKPISRGAFGKVYLGQKGGKLYAVKVKKADMIN
 KNMTHQVQAERDALALSKSPFVVLHLYSLQASNIYLIMEYLIGGDVKSLLHIYGYFDEEMAIKYISEVA
 LALDYLHRHGIHRDLKPDNMLISNEGHIKLTDFGLSKVTLNRDINMMDILTPSMSKPKQDYSRTPGQV
 LSLISSLGFFTPVGEKDQDSANMF SAPKSAQLSRGFICPMSVDQKEPTSYSKLLKSCFETLSSNPEIP
 VKCLTSNLLQCRKRLGTSSTSSQSHTFVSSVESECHSNPKWERDCQSTESSGCAMSWNAVEMLYAKSTSA
 IKTKTELELALSPIHSSAIPAAGSNQVTLPRKCFREISWEARDPDENMTIDKGQSGFCQSSQSRVNSS
 ATSEEHLGKRNKRNFLVDSSPCQEIMQSKNCTEYEANKERQGCRANQSTGLTTEVQNLKLSGCESQQ
 LDYANKENIVTYLTDRQTPEKLHIPTIAKNLMSELEDEDCELSKKDCLSSNSVCSDEDRALKTTCVSDSDS
 SFPGVSMMESSLEIQALEPKSIRDYSFEENPTEDL FVLPKCQENSLPQDDCHACIQDSSQVSAHPSKAP
 KALTSKINVVAFRSFNHINASTNSEPSKISITSLDAMDISCDYSGSYPMASVPTKGRHYTSHQTPNQV
 KLGTSYRTPKSVRRGAAPVDDGRILGTPDYLAPELLLGTAGPAVDWWALGVCLFEFLTGIPIPFNDETPQ
 QVFQNILKRDIPWPEEGEKLSDNAQSAMDMLLTIDDSKRAGMRELKQHPLFSEVDWENLQHQTMPFVQP
 DDETDTSYFEARNAQHLTISGFSL

TRTRPLE - GFP Tag - V

Restriction Sites:

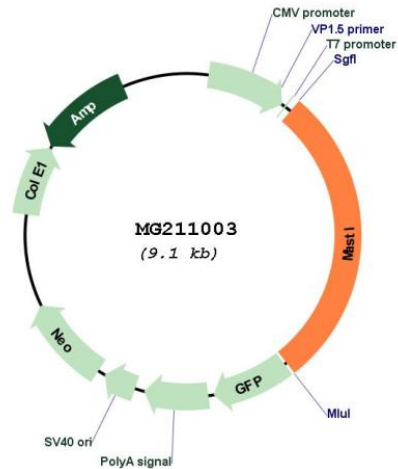
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM_025979

ORF Size: 2595 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_025979.4](#), [NP_080255.3](#)

RefSeq Size: 4652 bp

RefSeq ORF: 2598 bp

Locus ID: 67121

UniProt ID: [Q8C0P0](#)

Cytogenetics: 2 A3

Gene Summary: Serine/threonine kinase that plays a key role in M phase by acting as a regulator of mitosis entry and maintenance. Acts by promoting the inactivation of protein phosphatase 2A (PP2A) during M phase: does not directly inhibit PP2A but acts by mediating phosphorylation and subsequent activation of ARPP19 and ENSA at 'Ser-62' and 'Ser-67', respectively. ARPP19 and ENSA are phosphatase inhibitors that specifically inhibit the PPP2R2D (PR55-delta) subunit of PP2A. Inactivation of PP2A during M phase is essential to keep cyclin-B1-CDK1 activity high. Following DNA damage, it is also involved in checkpoint recovery by being inhibited (By similarity).[UniProtKB/Swiss-Prot Function]