

## Product datasheet for **MG224429**

### Retsat (NM\_026159) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Retsat (NM_026159) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Retsat
Synonyms:	0610039N19Rik; C80029; MMT-7; Ppsig
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG224429 representing NM\_026159  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTGGATCACTGCTCTGCTGCTGGCCGTGCTGCTGCTGGTGATCCTCCACAGGGTCTACGTGGGCCTTT  
 ACGCTGCAAGTTCCCGAACCCCTTCGCCGAGGATGTCAAGCGACCGCCTGAACCCCTGGTGACCGACAA  
 GGAGGCTAGGAAGAAAGTTCTCAAACAAGCTTTCTCAGTCAGCCGAGTACCAGAGAAGCTGGATGCAGTG  
 GTGATCGGCAGCGGCATTGGGGGACTGGCCTCAGCTGCGGTTCTAGCTAAAGCTGGCAAGAGAGTCTTTG  
 TGCTGGAACAACATACCAAGGCGGGCGGCTGTTGTACATCCTTTGGGAAAAATGGCCTTGAATTTGACAC  
 TGGAAATTCATTATATTGGACGAATGCGGGAGGGCAACATTGGCCGTTTTATCTTGGACCAGATCACTGAA  
 GGGCAACTGGACTGGGCCCCATGGCCTCCCCTTTGACTTGATGATACTAGAAGGGCCCAATGGCCGAA  
 AGGAGTCCCCATGTACAGTGGGAGGAAAGAATACATCCAGGGCCTTAAGAAGAAGTTCCCAAGGAAGA  
 AGCTGTCAATTGACAAGTACATGGAGTTGGTTAAGGTGGTGGCCCGTGGAGTCTCTCATGCAGTTCTACTC  
 AAGTTCCTCCCATTGCCCTTGACTCAGCTCCTCAGCAAGTTGGGCTACTGACTCGTTTCTCTCCATTCT  
 GCCGAGCGTCTACGCAGAGCCTAGCTGAAGTCTGCAGCAGCTTGGGGCTTCCCCTGAGCTCCAGGCTGT  
 TCTCAGCTACATCTTCCCACCTACGGAGTAACTCCCAGCCACACCGCCTTTTCTTGCATGCTCTGCTG  
 GTTGACCACTACATAAAGGGGCATATTACCCTCGAGGGGGTTCCAGTGAGATCGCCTCCATACCATCC  
 CTTTGATTACGCGGGCCGGGGCGCTGTCTCACCAGGGCCACTGTACAGAGTGTGCTGCTGGACTCAGC  
 TGGGAGAGCGTGTGGTGTAGTGAAGAAGGGACAAGAGCTGGTGAACATCTACTGCCAGTTGTATC  
 TCCAATGCGGGAATGTTCAATACCTATCAGCACTTGTGCCAGAGACTGCCCCATCTGCCAGATGTGA  
 AGAAGCAGCTGGCGATGGTAAGGCCTGGTCTGAGCATGCTCAATCTTCACTGTCTGAAAGGCACCAA  
 GGAGGACCTGAAGCTTCACTCCACCACTACTATGTTTATTTTACACAGACATGGACAAAAGCGATGGAG  
 CGCTATGTCTCTATGCCAAGGAAAAGGCTCCAGAACACATTCCCCTTCTTCTTATTGCCTTCCCATCAA  
 GCAAGGATCCAACCTGGGAGGAGCGATTCCAGACCGATCCACAATGACTGCGCTGGTACCCATGGCCTT  
 TGAATGGTTCGAGGAGTGGCAGGAGGAGCCAAAGGGCAAGCGTGGTGTGACTATGAGACCTCAAAAAT  
 GCCTTCGTGGAAGCCTCTATGTCGGTGATCATGAACTGTTCCCACAGCTGGAGGGCAAGGTGGAGAGTG  
 TGACTGGAGGTCACCACTGACCAACCAGTACTATCTGGCTGCACCCGAGGAGTACCTATGGAGCTGA  
 CCATGACTTGGCTCGGCTGCATCCTCATGCAATGGCTTCCATAAGAGCCCAACCCCATCCCAACCTC  
 TACCTGACAGGCCAAGATATCTTCACTGTGGGCTGATGGGGCCCTGCAGGGGGCCTTGTGTGCAGCA  
 GTGCCATCCTGAAACGGAACCTGTACTCAGATCTGCAGGCTCTTGGCTCAAAGGTCAAGGCACAAAAGAA  
 GAAGATG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG224429 representing NM\_026159  
 Red=Cloning site Green=Tags(s)

MWITALLLAVLLLVLHRVYVGLYAASSPNPFAEDVKRPPEPLVTDKEARKKVLKQAFSVSRVPEKLDV  
 VIGSGIGGLASAAVLAKAGKRVLVLEQHTKAGGCCHTFGENGLEFDTGIHYIGRMREGNIGRFILDQITE  
 GQLDWAPMASPFDLMILEGPNRKEFPMSYGRKEYIQGLKKKFPKKEAVIDKYMELVKVVARGVSHAVLL  
 KFLPLPLTQLLSKFGLLTRFSPFCRASTQSLAEVLQQLGASRELQAVLSYIFPTYGVTPSHTAFSLHALL  
 VDHYIQGAYYPRGGSSEIAFHITPLIQRAGGAVLTRATVQSVLLDSAGRACGVSVKKGQELVNIYCPVVI  
 SNAGMFNTYQHLLPETVRHLPDVKKQLAMVRPGLSMLSIFICLKGTKEDLKLQSTNYYYVFDTMDKAME  
 RYVSMPKEKAPEHIPLLFIAFPSSKDPTWEERFPDRSTMTALVPMFEWFEWQEEPKGKRGVDYETLKN  
 AFVEASMSVIMKLFQLEGKVESVTGGSPLTNQYYLAAPRGATYGADHDLARLHPHAMASIRAQTPINL  
 YLTGQDIFTCGLMGALQGALLCSSAILKRNLYSDLQALGSKVKAQKKKM

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

SgfI-MluI



<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	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>	<a href="#">NM_026159.5</a>
<b>RefSeq Size:</b>	1942 bp
<b>RefSeq ORF:</b>	1830 bp
<b>Locus ID:</b>	67442
<b>UniProt ID:</b>	<a href="#">Q64FW2</a>
<b>Cytogenetics:</b>	6 C1
<b>Gene Summary:</b>	Catalyzes the saturation of all-trans-retinol to all-trans-13,14-dihydroretinol (PubMed:15358783, PubMed:17253779, PubMed:19139408). Does not exhibit any activity toward all-trans-retinoic acid, nor 9-cis, 11-cis or 13-cis-retinol isomers (PubMed:15358783). May play a role in the metabolism of vitamin A (PubMed:15358783, PubMed:17253779). Independently of retinol conversion, may regulate liver metabolism upstream of MLXIPL/ChREBP (PubMed:28855500). Required for adipocyte differentiation in a 3T3-L1 cell culture model (PubMed:19139408). This effect seems not to mimic the in vivo situation in which animals show increased adiposity in the absence of RETSAT (PubMed:19940255). [UniProtKB/Swiss-Prot Function]