

## Product datasheet for **RG200312**

### INSIG1 (NM\_005542) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	INSIG1 (NM_005542) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	INSIG1
Synonyms:	CL6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG200312 representing NM_005542 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCAGATTGCACGACCACTTCTGGAGCTGCTCCTGTGCGCACAGCGGAGGCGCCGAGGCCCCCGC  
GAGCCAGCGCCGCGGGCTGGCGCCAAGGTTGGGGAGATGATCAACGTTTCCGTGTCGGGGCCCTCCCT  
GCTGGCGCCACGGTGCCCGGACGCTGACCCCGCGCCAGGGCCGAGTGTGCGATGAGCGGCCCC  
GAGCCCGCAGCCCTACCCCAACCTGGCATCATCGCCTGTTGCAGAGGAGCCTCGTCTCTTCTCGG  
TTGGGGTGGTCTAGCCCTGGTCTCAACCTGCTGCAGATCCAGAGGAATGCACTCTCTCCCCGAGGA  
GGTGATCGCCACCATCTTTTCTCCGCCTGGTGGTCCCTCCCTGCTGCGGGACAGCAGCTGCTGTTGTT  
GGCCTACTGTACCCTGTATCGACAGTCACCTCGGAGAACCCACAAATTAAGAGAGAATGGGCCAGTG  
TCATGCGCTGCATAGCAGTTTTTGTGGCATTAAACCACGCCAGTGCTAAATTTGGATTTTGCCAATAATGT  
CCAGCTGTCTTGACTTTAGCAGCCCTATCTTTGGGCCTTTGGTGGACATTTGATCGTCCAGAAGTGGC  
CTTGGGCTGGGGATCACCATAGCTTTTCTAGCTACGCTGATCACGCAGTTTCTCGTGATAATGGTGTCT  
ATCAGTATACATCCCAGATTTCTCTATATTCGTTCTTGGCTCCCTTGATATTTTTCTCAGGAGGCGT  
CACGGTGGGGAACATAGGACGACAGTTAGCTATGGGTGTTCTGAAAAGCCCCATAGTGAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG200312 representing NM\_005542  
 Red=Cloning site Green=Tags(s)

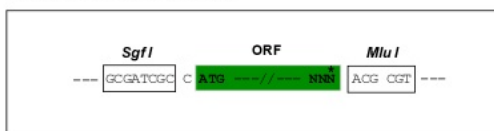
MPRLHDFWSCSCAHSARRRGPPrASAAGLAAKVGEMINVSVSGPSELLAAHGAPDADPAPRGRSAAMSGP  
 EPGSPYPNTWHHRLLQRSLVLFVSGVVLALVLNLLQIQRNVTLPFEEVIATIFSSAWVPPCCGTAADV  
 GLLYPCIDSHLGEPHKFKREWASVMRCIAVFGINHASAKLDFANNVQLSLTLAALSLGLWTFDRSRSG  
 LGLGITIAFLATLITQFLVYNGVYQYTSDFLYIRSWLPCIFFSGGVTGNIQRQLAMGVPEKPHSD

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



```

              Kozac
              Consensus
    EcoR I   BamH I Kpn I   RBS       Sgf I   Asc I
CTATAGGGCGGCGCGGAATCGTCGACTGGATCCGGTACCGAGGAGATCTGCCCGCGGATCGCCGGCGGCCAGATCT

    Hind III   Nhe I   Rsr II   Mlu I       Not I   Xho I       GFP Tag
CAAGCTTAAGTACTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC --- ---
              T   R   T   R   P   L   E   M   E   S   D   -   -   -

              Pme I   Fse I
--- GAA GAA AGA GTT TAA ACGGCGGCGCGGAGCT
- - - E E R V Stop
  
```

**ACCN:** NM\_005542

**ORF Size:** 831 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\\_005542.6](#)

**RefSeq Size:** 2978 bp

**RefSeq ORF:** 834 bp

**Locus ID:** 3638

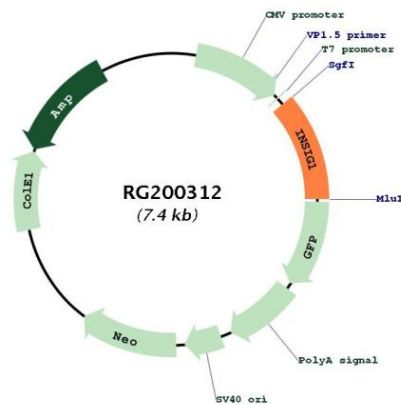
**UniProt ID:** [O15503](#)

**Cytogenetics:** 7q36.3

**Protein Families:** Druggable Genome, Transmembrane

**Gene Summary:** This gene encodes an endoplasmic reticulum membrane protein that regulates cholesterol metabolism, lipogenesis, and glucose homeostasis. The encoded protein has six transmembrane helices which contain an effector protein binding site. It binds the sterol-sensing domains of sterol regulatory element-binding protein (SREBP) cleavage-activating protein (SCAP) and 3-hydroxy-3-methylglutaryl-coenzyme A reductase (HMG-CoA reductase), and is essential for the sterol-mediated trafficking of these two proteins. It promotes the endoplasmic reticulum retention of SCAP and the ubiquitin-mediated degradation of HMG-CoA reductase. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Oct 2016]

## Product images:



Circular map for RG200312