

Product datasheet for RG202701

Insulin (INS) (NM 000207) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids

Product Name: Insulin (INS) (NM_000207) Human Tagged ORF Clone

Tag: TurboGFP
Symbol: Insulin

Synonyms: IDDM; IDDM1; IDDM2; ILPR; IRDN; MODY10; PNDM4

Mammalian Cell Neomycin

Selection:

Vector: pCMV6-AC-GFP (PS100010)

E. coli Selection: Ampicillin (100 ug/mL)

ORF Nucleotide >RG202701 representing NM_000207

Sequence: Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC

GCCGCGATCGCC

ATGGCCCTGTGGATGCGCCTCCTGCCCCTGCTGGCGCTGCTGGCCCTCTGGGGACCTGACCCAGCCGCAGCCTTTGTGAACCAACACCTGTGCGGGCTCACACCTGGTGGAAGCTCTCTACCTAGTGTGCGGGGAACGAGGCTTCTTCTACACACCCCAAGACCCGCCGGGAGGCAGAGGACCTGCAGGTGGGGCAGGTGGAGCTGGGCGGGGGGCCCTGGTGCAGGAGCCTGCAGAAGCCTTGCAGAACCGTGGCATTGTGGAAC

AATGCTGTACCAGCATCTGCTCCCTCTACCAGCTGGAGAACTACTGCAAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG202701 representing NM_000207

Red=Cloning site Green=Tags(s)

MALWMRLLPLLALLALWGPDPAAAFVNQHLCGSHLVEALYLVCGERGFFYTPKTRREAEDLQVGQVELGG

GPGAGSLQPLALEGSLQKRGIVEQCCTSICSLYQLENYCN

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-Mlul



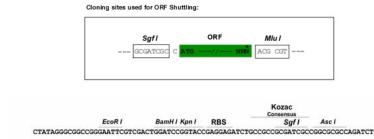
OriGene Technologies, Inc. 9620 Medical Center Drive, Ste 200

CN: techsupport@origene.cn

Rockville, MD 20850, US Phone: +1-888-267-4436 https://www.origene.com techsupport@origene.com EU: info-de@origene.com



Cloning Scheme:



Fse I GAA GAA AGA GTT TAA ACGGCCGGCCGCGGAGCT

Mlu I CAAGCTTAACTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC

Nhe I Rsr II

Hind III

ACCN: NM_000207

ORF Size: 330 bp

Due to the inherent nature of this plasmid, standard methods to replicate additional amounts **OTI Disclaimer:**

of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by

calling 301.340.3188 option 3 for pricing and delivery.

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

This clone was engineered to express the complete ORF with an expression tag. Expression **OTI Annotation:**

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: <u>NM 000207.3</u>

 RefSeq Size:
 450 bp

 RefSeq ORF:
 333 bp

 Locus ID:
 3630

 UniProt ID:
 P01308

Cytogenetics: 11p15.5

Protein Families: Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein

Protein Pathways: Insulin signaling pathway, Maturity onset diabetes of the young, mTOR signaling pathway,
Oocyte meiosis, Progesterone-mediated oocyte maturation, Prostate cancer, Regulation of

actin cytoskeleton, Regulation of autophagy, Type I diabetes mellitus, Type II diabetes mellitus

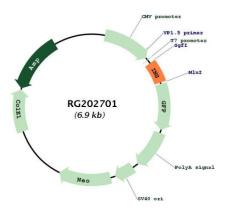
Gene Summary: This gene encodes insulin, a peptide hormone that plays a vital role in the regulation of

carbohydrate and lipid metabolism. After removal of the precursor signal peptide, proinsulin is post-translationally cleaved into three peptides: the B chain and A chain peptides, which are covalently linked via two disulfide bonds to form insulin, and C-peptide. Binding of insulin to the insulin receptor (INSR) stimulates glucose uptake. A multitude of mutant alleles with phenotypic effects have been identified, including insulin-dependent diabetes mellitus, permanent neonatal diabetes diabetes mellitus, maturity-onset diabetes of the young type 10

and hyperproinsulinemia. There is a read-through gene, INS-IGF2, which overlaps with this gene at the 5' region and with the IGF2 gene at the 3' region. [provided by RefSeq, May 2020]



Product images:



Circular map for RG202701