

## Product datasheet for **SC120054**

### Insulin (INS) (NM\_000207) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Insulin (INS) (NM_000207) Human Untagged Clone
Tag:	Tag Free
Symbol:	Insulin
Synonyms:	IDDM; IDDM1; IDDM2; ILPR; IRDN; MODY10; PNDM4
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for NM_000207 edited AGCCCTCCAGGACAGGCTGCATCAGAAGAGGCCATCAAGCAGATCACTGTCCCTTCTGCCA TGGCCCTGTGGATGCGCCTCCTGCCCTGCTGGCGCTGCTGGCCCTCTGGGGACCTGACC CAGCCGCAGCCTTTGTGAACCAACACCTGTGCGGCTCACACCTGGTGAAGCTCTCTACC TAGTGTGCGGGGAACGAGGCTTCTTCTACACACCCAAGACCCGCCGGGAGGCAGAGGACC TGCAGGTGGGGCAGGTGGAGCTGGGCGGGGGCCCTGGTGCAGGCAGCCTGCAGCCCTTGG CCCTGGAGGGGTCCCTGCAGAAGCGTGGCATTGTGGAACAATGCTGTACCAGCATCTGCT CCCTCTACCAGCTGGAGAACTACTGCAACTAGACGCAGCCCGCAGGCAGCCCCCACCCG CCGCCTCCTGCACCGAGAGAGATGGAATAAAGCCCTTGAACCAACAAAAAAAAAAAAAAAAA AAAAAAAAAAAAAAAAA
Restriction Sites:	Please inquire
ACCN:	NM_000207
Insert Size:	500 bp



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**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts 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](mailto: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](#)

**OTI Annotation:** The open reading frame of this clone has been fully sequenced and found to be a perfect match to the protein associated with this reference, NM\_000207.2.

**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\\_000207.1](#), [NP\\_000198.1](#)

**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]  
Transcript Variant: This variant (1) represents the shortest variant. All variants encode the same protein.