

Product datasheet for **RR214502**

Ispd (NM_001008386) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ispd (NM_001008386) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ispd
Synonyms:	Nip
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>RR214502 representing NM_001008386
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGAGTCCGGGCGTGCAGCAGGCCCGCTGAGCCTCGGCATTGCGTGAGCGGCCGGGCGGCGGGTT
 TAGCGTTCCTGGGCTTCCATTGTCGCTGCCGGGCGGAGCCGGGAGCCGATTGGAAGTGTAGCCGC
 TGTGCTGCCGGCTGGGGCTGCGGAGAAAGGATGGGCGTCCGCACCCGAAGCAGTTCTGCCGGTCTG
 GAGAGGCCGCTCATCAGCTACACACTGCAGGCTATGGAGAGAGTATGCTGGATAAAGGACATTGTTGTGA
 CAGTGACAGGGGAGAACATGGAAGCGATGAGAAGCATCATTAGAGGTATGGGCATAAGCGCATCTCACT
 AGCTGAGGCCGGAGCCACGCGCCACAGATCAATTTTCAATGGACTGAAAGCCCTGCCAGAAGATCAGCCA
 GGCTGTGAACTCACTAGACCAGAAGTTGTGATTATCCACGATGCCGTGAGACCTTTTGTGAGGAAGATA
 TCCTCCTGAGAGTTGCTAGCAGCTAAGGAGCATGGGCGAGCAGGCAATTCGACCTCTGGTGTCCAC
 TGTGTCAGTCCGTCTGCTGATGGTCACTTAGACCACTACTGGACCGTCCCAAGCACAGGGCAAGCGAA
 ATGCCCAAGGCTTTTCACTTTGATGTGATCTATGAAGCGTATCAGAAGTGTAGTATTTGACTTGGAA
 TTGGAACAGAGTCTTGCAGTTGCCCTAAAATACTGTCACAGGAAAGCAAACTTGTAGAGGGACCCC
 TGACCTCTGGAAGGTGACCTACAAAAGACCTGTGTGCAGCTGAAGCCATGATTAAGGAAAAATTTCA
 CAAGAGATTTGTGTGGTTCGTGAACACAAAAGATGAAGAATCTGTAGGACATCTTCTTGGAGGAGTGTAA
 GAAATGAACTAAATTGTATTAAGTCACATCCACAGTTTTGGATCGCACCAGTGGAGACATTGAGAACTT
 CATAGACCAATGCTACAGTTTCACTGTGTGAATGTTGTGCTCTGAGAGTCGAGAAACCAGGAAGTTA
 CTGAGTATCCTCGAAGAGAGCAGCCTTCTTCTGTATCCCCTCGTTGTCGTTTTGGTGCATTGCTTTG
 ATTTACGGTAGTGCCGCTCGCTCAGAAGATGGAGAACCCTGGTGGATCAGGGAATTAGCAAAGGAAG
 AAAAGGAAGGAATGTTCTATTAAGTGGAGTCTCCTAAATCACTCACAGGATGAGCAGAAGCTACAAGAG
 AGTTTAGTACAAAGTGCAGCCATCATAGCTGCCTTGGTTAAGGAAAGAAATTCTGCACTCGTCGGGCGAG
 TCCTGGTGGCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RR214502 representing NM_001008386
 Red=Cloning site Green=Tags(s)

MESGPCSRPAEPRHCVSGRAGLAGLAFPAFPLSAAGAEPGSRIGTVAAVLPAGGCGERMVTRPKQFCRVL
 ERPLISYTLQAMERVCWIKDIVVTVTGENMEAMRSIIQRYGHRISLAEAGATRHRSIFNGLKALAEDQP
 GCELTRPEVVIHDAVRPFVEEDILLRVVLAKEHGAAGAIRPLVSTVVSPSADGHLHDHSLDRAKHRASE
 MPQAFHFDVIYEAYQKCSDFDLEFGTECLQLALKYCHRKAKLVEGTPDLWKVITYKQDLCAEAMIKEKIS
 QEICVVVNTKDEESVGHLLLEVLRLNELNCIKVTSTVLDRTSGDIENFIDQCYSFICVNVVSSSRETRKL
 LSILEESSLPLLVPVVVVLVHCFDFTVVPLAQKMENLVWIRELAKEAKGRNVLLSGVLLNHSQDEQKLQE
 SLVQSAIIAALVKERNALVGQLLVA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

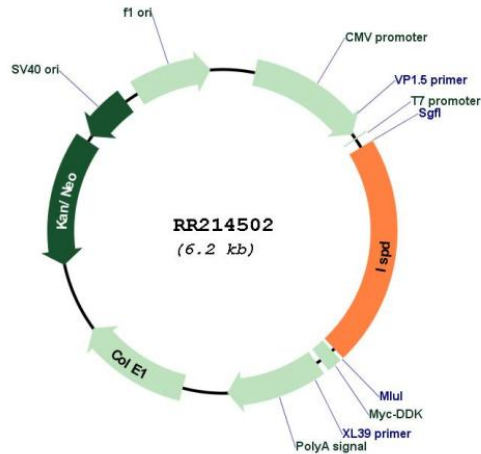
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001008386

ORF Size: 1341 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:	<ol style="list-style-type: none">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_001008386.1, NP_001008387.1</u>
RefSeq Size:	2645 bp
RefSeq ORF:	1344 bp
Locus ID:	493574
UniProt ID:	<u>Q5S6T3</u>
Cytogenetics:	6q16-q21
MW:	49.2 kDa
Gene Summary:	Cytidylyltransferase required for protein O-linked mannosylation (By similarity). Catalyzes the formation of CDP-ribitol nucleotide sugar from D-ribitol 5-phosphate. CDP-ribitol is a substrate of FKTN during the biosynthesis of the phosphorylated O-mannosyl trisaccharide (N-acetylgalactosamine-beta-3-N-acetylglucosamine-beta-4-(phosphate-6-)mannose), a carbohydrate structure present in alpha-dystroglycan (DAG1), which is required for binding laminin G-like domain-containing extracellular proteins with high affinity (By similarity). Shows activity toward other pentose phosphate sugars and mediates formation of CDP-ribulose or CDP-ribose using CTP and ribulose-5-phosphate or ribose-5-phosphate, respectively (By similarity). Not Involved in dolichol production (By similarity).[UniProtKB/Swiss-Prot Function]