Product datasheet for RC213878L4

JAK1 (NM_002227) Human Tagged Lenti ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	JAK1 (NM_002227) Human Tagged Lenti ORF Clone
Tag:	mGFP
Symbol:	JAK1
Synonyms:	AIIDE; JAK1A; JAK1B; JTK3
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
E. coli Selection:	Chloramphenicol (34 ug/mL)
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(RC213878).
Restriction Sites:	SgfI-MluI
Cloning Scheme:	

Cloning sites used for ORF Shuttling:

Sgf I   ORF   Mlu I
--- GCG ATC GC C | ATG --- // --- NNN* | ACG CGT ---

Kozak Consensus

EcoR I   BamH I   RBS   Sgf I   ORF
CTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGC C ATG --- --- ---

Mlu I   Not I   Xho I   mGFP Tag
--- --- --- --- --- --- NNN ACG CGT ACG CGG CCG CTC GAG ATG AGC GGG GGC --- --- --- ---
                    T   R   T   R   P   L   E   M   S   G   G   -   -   -   -

--- --- GGA CTC AGA GTT TGG GTA GGA AGC
 -   -   G   L   R   V

* The last codon before the Stop codon of the ORF.

ACCN:	NM_002227
ORF Size:	3462 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 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:	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_002227.2
RefSeq Size:	5053 bp
RefSeq ORF:	3465 bp
Locus ID:	3716
UniProt ID:	P23458
Cytogenetics:	1p31.3
Domains:	pkinase, SH2
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Jak-STAT signaling pathway, Pancreatic cancer, Pathways in cancer
MW:	133.3 kDa

Gene Summary: This gene encodes a membrane protein that is a member of a class of protein-tyrosine kinases (PTK) characterized by the presence of a second phosphotransferase-related domain immediately N-terminal to the PTK domain. The encoded kinase phosphorylates STAT proteins (signal transducers and activators of transcription) and plays a key role in interferon-alpha/beta, interferon-gamma, and cytokine signal transduction. This gene plays a crucial role in effecting the expression of genes that mediate inflammation, epithelial remodeling, and metastatic cancer progression. This gene is a key component of the interleukin-6 (IL-6)/JAK1/STAT3 immune and inflammation response and is a therapeutic target for alleviating cytokine storms. The kinase activity of this gene is directly inhibited by the suppressor of cytokine signalling 1 (SOCS1) protein. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2020]

Product images:
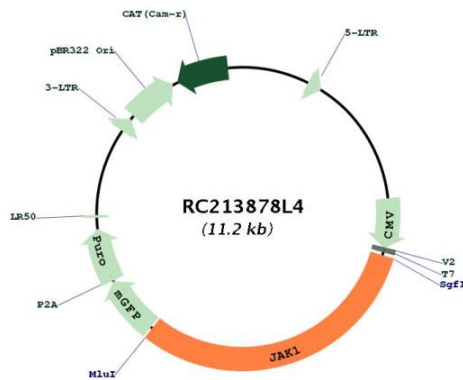
Circular map for RC213878L4
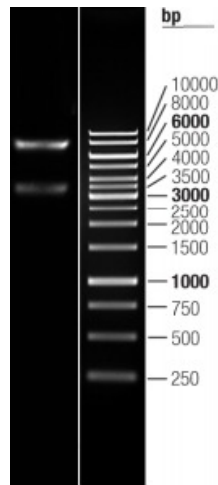
Double digestion of RC213878L4 using SgfI and MluI