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Product datasheet for MC223533

Jak3 (NM_010589) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Jak3 (NM_010589) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Jak3
Synonyms:	fae; wil
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

Fully Sequenced ORF:

>MC223533 representing NM_010589
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCACCTCCAAGTGAGGAGACACCTCTGATCCCTCAGCGCTCTTGCAGCCTCTCATCCTCAGAGGCAG
GAGCCCTGCATGTGCTCCTTCCTCCCCGGGGACCTGGGCCTCCCCAGCGATTGTCATTCTCTTTTGGGGA
CTACTTGGCTGAGGATTTATGTGTGCGAGCTGCCAAGGCCTGTGGCATCCTGCCTGTTTATCATTCGCTT
TTCGCTCTGGCCACTGAGGACTTCTCTTGCTGGTTTCCCCCAAGCCACATCTTCTGCATAGAGGACGTGG
ACACTCAAGTCTTGGTCTACAGGCTACGCTTTTATTTCCCTGACTGGTTTGGGCTGGAGACATGTCACCG
CTTTGGGCTGCGCAAAGATTTGACCAGTGCCATCCTTGACTTACACGTTTTAGAACATCTCTTTGCTCAG
CACCGCAGTGACCTGGTGAGTGGGCGCCTCCCGGTGGGCCTTAGCATGAAGGAGCAGGGAGAGTTCCTGA
GCCTGGCCGTGCTGGACTTGGCCCAGATGGCTCGTGAGCAGGCCCAGCGCCCAGGAGAGCTGCTGAAGAC
GGTCAGTTACAAAGCCTGTCTGCCGCCCAGCCTGCGCGATGTGATCCAGGGCCAGAACTTCGTGACACGC
AGGCGCATCCGCAGGACCGTGGTCTTGGCGCTGCGCCGTGTGGTCGCCTGCCAGGCCGACCGCTACGCGC
TCATGGCCAAGTATATTTTGGACCTGGAGCGGCTACATCCAGCGGCCACCACCGAGACCTTCCGTGTGGG
GCTCCCGGGCGCCCAGGAGGAGCCGGGGCTTCTGCGTGTGGCGGGGGACAACGGCATCTCCTGGAGCTCC
GGGGACCAGGAGCTTTTCCAGACCTTCTGTGACTTTCCGGAAATCGTGGATGTCAGCATCAAGCAGGCCC
CACGTGTGGGTCCGGCAGGGGAACACCGGCTGGTCACCGTCACCAGGATGGACGGCCACATCCTGGAAGC
GGAGTTTCCGGGGCTGCCTGAGGCGCTGTCCTTCGTGGCCCTTGTGGATGGGTACTTCCGCCTGATCTGC
GACTCCAGGCATTATTTCTGCAAGGAGGTGGCGCCGCCGCGGCTGCTGGAGGAGGAGGCGGAGCTGTGCC
ATGGACCCATCACGTTAGACTTTGCCATCCACAAGCTGAAGGCCGCTGGCTCCCTCCCAGGCACCTACAT
TCTCCGCCGCAGCCCGCAGGACTATGACAGCTTTCTTCTTACCGCCTGCGTCCAGACTCCTCTTGGCCCC
GACTACAAGGGCTGCCTCATCCGCCAGGACCCCAGCGGGGCTTTCTCCCTGGTTGGCCTCAGCCAGCCCC
ACAGAAGCCTGCGGGAGCTGCTTGCAGCCTGCTGGAATTCTGGGCTGCGAGTAGACGGTGCTGCCCTGAA
CCTAACATCCTGCTGCGCTCCCAGACCCAAGGAAAAGTCCAATTTGATCGTGGTGCGAAGGGGCTGCACC
CCCGCGCCTGCCCCTGGCTGCTCCCCGTCCTGCTGTGCGCTGACACAGCTGAGCTTCCACACAATTCCAA

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CGGACAGCCTGGAGTGGCACGAGAACCTGGGTCACGGTTCTTTTACCAAGATCTTCCGTGGCCGCAGGCG
GGAGGTCGTGGATGGTGAGACACATGACTCGGAAGTCCTCCTGAAGGTCATGGACTCCAGACATCGGAAC
TGCATGGAGTCTTTTCTGGAAGCCGCAAGCTTGATGAGCCAAGTATCCTACCCGCACCTGGTGTTACTGC
ACGGCGTCTGCATGGCTGGAGACAGCATCATGGTGCAGGAATTTGTGTATCTAGGAGCAATTGACATGTA
CCTGCGCAAGCGTGGCCACCTGGTGTCAGCCAGCTGGAAACTGCAGGTGACCAAGCAGCTGGCATATGCC
CTTAACTACTTGGAGGACAAAGGCCTTCCTCACGGCAACGTCTCAGCACGGAAGGTGCTCCTGGCTCGTG
AGGGGGGTGATGGGAATCCACCTTTCATTAAGCTGAGTGATCCTGGTGTCAGTCCCACTGTGCTGAGCCT
GGAAATGCTCACCGACAGAATACCCTGGGTGGCCCCCGAATGTCTCCAGGAGGCTCAGACACTCGGCTTG
GAGGCTGACAAGTGGGGCTTTGGAGCCACCACGTGGGAGGTGTTCAGCGGGGGACCCGCCCACATCACCT
CGCTGGAGCCCGCCAAAAAGCTGAAGTTCTATGAGGACCAGGGACAGCTGCCCGCTCTCAAATGGACAGA
ACTGGCGGGACTTATCACACAGTGCATGGCCTATGATCCTGGCCGGCGCCCCTCCTTCCGAGCTATCCTC
AGAGACCTCAACGGCCTCATTACATCAGATTACGAGCTCCTCTCAGACCCCACACCTGGCATCCCGAGTC
CTCGAGATGAGCTGTGCGGTGGCGCCCAGCTCTATGCCTGCCAGGACCCCGCCATATTCGAGGAGAGACA
CCTTAAGTACATCTCTTTGCTGGGCAAGGGCAACTTTGGCAGCGTGGAGCTGTGCCGCTATGACCCCCTG
GGGGACAATACGGGACCCCTGGTGGCAGTGAAACAGCTACAGCACAGCGGGCCAGACCAGCAGAGGGACT
TCCAGCGGGAGATTCAGATCCTTAAGGCTCTGCACAGCGACTTCATCGTCAAGTACCGGGGAGTCAGCTA
TGGGCCAGGTCGCCAGAGCCTGCGGTTGGTGATGGAGTACCTGCCCAGCGGCTGCCTGCGAGACTTCCTG
CAGCGCCATCGCGCGCGCCTGCACACCGACCGCCTACTGCTGTTCGCTTGGCAGATCTGCAAGGGCATGG
AGTACCTGGGTGCGCGCCGCTGCGTACACCGTGACCTGGCTGCGCGCAACATCTTGGTGGAGAGCGAGGC
TCATGTGAAGATCGCGGACTTCGGCCTCGCTAAGCTGCTGCCCCTGGGAAAGGACTACTACGTGGTCCGC
GAGCCTGGCCAAAGCCCCATCTTTTGGTATGCCCCGGAGTCCCTATCTGACAACATCTTCTCCCGCCAAT
CTGACGTGTGGAGCTTCGGAGTGGTGTTGTACGAGCTCTTCACCTACTGCGACAAGAGCTGCAGCCCATC
CGCTGAGTTCCTGAGCATGATGGGGCCTGAGCGTGAAGGACCCCCGCTCTGCCGCCTCCTGGAGCTGCTG
GCAGAGGGCCGACGCCTCCCACCACCTCCCACCTGCCCCACCGAGGTTCAGGAGCTCATGCAGCTGTGCT
GGGCGCCCAGCCCGCACGACCGGCCAGCCTTCGGCACCCTGAGCCCCCAGCTGGACGCGCTGTGGCGTGG
AAGACCCGGATAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_010589

Insert Size: 3303 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_010589.6, NP_034719.2

RefSeq Size:	3950 bp
RefSeq ORF:	3303 bp
Locus ID:	16453
UniProt ID:	Q62137
Cytogenetics:	8 34.43 cM
Gene Summary:	Non-receptor tyrosine kinase involved in various processes such as cell growth, development, or differentiation. Mediates essential signaling events in both innate and adaptive immunity and plays a crucial role in hematopoiesis during T-cells development. In the cytoplasm, plays a pivotal role in signal transduction via its association with type I receptors sharing the common subunit gamma such as IL2R, IL4R, IL7R, IL9R, IL15R and IL21R. Following ligand binding to cell surface receptors, phosphorylates specific tyrosine residues on the cytoplasmic tails of the receptor, creating docking sites for STATs proteins. Subsequently, phosphorylates the STATs proteins once they are recruited to the receptor. Phosphorylated STATs then form homodimer or heterodimers and translocate to the nucleus to activate gene transcription. For example, upon IL2R activation by IL2, JAK1 and JAK3 molecules bind to IL2R beta (IL2RB) and gamma chain (IL2RG) subunits inducing the tyrosine phosphorylation of both receptor subunits on their cytoplasmic domain. Then, STAT5A AND STAT5B are recruited, phosphorylated and activated by JAK1 and JAK3. Once activated, dimerized STAT5 translocates to the nucleus and promotes the transcription of specific target genes in a cytokine-specific fashion.[UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (1) represents the longer transcript and shares its terminal exon with the insulin-like 3 gene(GeneID:16336). Both variants 1 and 2 encode the same protein. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.