

## Product datasheet for **RC212394**

### **STAT3 (NM\_213662) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	STAT3 (NM_213662) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	STAT3
Synonyms:	ADMIO; ADMIO1; APRF; HIES
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC212394 representing NM\_213662  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCCAATGGAATCAGCTACAGCAGCTTGACACACGGTACCTGGAGCAGCTCCATCAGCTCTACAGT  
 ACAGCTTCCCAATGGAGCTGCGGCAGTTTCTGGCCCTTGGATTGAGAGTCAAGATTGGGCATATGCGGC  
 CAGCAAAGAATCACATGCCACTTTGGTGTTCATAATCTCCTGGGAGAGATTGACCAGCAGTATAGCCGC  
 TTCCTGCAAGAGTCGAATGTTCTCTATCAGCACAATCTACGAAGAATCAAGCAGTTTCTTCAGAGCAGGT  
 ATCTTGAGAAGCCAATGGAGATTGCCCGGATTGTGGCCCGTGCCTGTGGGAAGAATCACGCCTTCTACA  
 GACTGCAGCCACTGCGGCCAGCAAGGGGGCCAGGCCAACCCCCACAGCAGCCGTGGTACGGAGAAG  
 CAGCAGATGCTGGAGCAGCACCTCAGGATGTCCGGAAGAGAGTGCAGGATCTAGAACAGAAAATGAAAG  
 TGGTAGAGAATCTCCAGGATGACTTTGATTTCAACTATAAAACCCTCAAGAGTCAAGGAGACATGCAAGA  
 TCTGAATGGAACAACCAAGTCAAGTACAGCAGGAGAGTGCAGCAGCTGGAACAGATGCTCACTGCGCTG  
 GACCAGATGCGGAGAAGCATCGTGAGTGAAGTGGCGGGGCTTTTGTGAGCGATGGAGTACGTGCAGAAAA  
 CTCTCACGGACGAGGAGCTGGCTGACTGGAAGAGGCGGCAACAGATTGCCTGCATTGGAGGCCCGCCCAA  
 CATCTGCCTAGATCGGCTAGAAAAGTGGATAACGTCATTAGCAGAATCTCAACTTCAGACCCGTCACAA  
 ATTAAGAAAAGTGGAGGAGTTGCAGCAAAAAGTTTCTACAAAAGGGGACCCCATTTGACAGCACCGGCCGA  
 TGCTGGAGGAGAGAATCGTGGAGCTGTTTGAAGAACTTAATGAAAAGTGCCTTTGTGGTGGAGCGGCAGCC  
 CTGCATGCCCATGCATCCTGACCGGCCCTCGTCATCAAGACCGCGTCCAGTTCCTACTAAAGTCAGG  
 TTGCTGGTCAAATCCCTGAGTTGAATTATCAGCTTAAATTAAGTGTGATTGACAAAAGACTTGGGG  
 ACGTTGCAGCTCTCAGAGGATCCCGGAAATTTAACATTCTGGGCACAAACACAAAAGTGAACATGGA  
 AGAATCCAACAACGGCAGCCTCTCTGCAGAATCAAACTTGACCCTGAGGGAGCAGAGATGTGGGAAT  
 GGGGGCCGAGCCAATTGTGATGCTTCCCTGATTGTGACTGAGGAGCTGCACCTGATCACCTTTGAGACCG  
 AGGTGTATCACCAAGGCCTCAAGATTGACCTAGAGACCCACTCCTTGCCAGTTGTGGTGTCTCCAACAT  
 CTGTCAGATGCCAAATGCCTGGGCGTCCATCCTGTGGTACAACATGCTGACCAACAATCCAAGAATGTA  
 AACTTTTTTACCAAGCCCCAATTGGAACCTGGGATCAAGTGGCCGAGGTCTGAGCTGGCAGTTCTCCT  
 CCACCACCAAGCGAGGACTGAGCATCGAGCAGCTGACTACACTGGCAGAGAACTCTTGGGACCTGGTGT  
 GAATTATTCAGGGTGTGAGATCACATGGGCTAAATTTTGCAAAGAAAACATGGCTGGCAAGGGCTTCTCC  
 TTCTGGGTCTGGCTGGACAATATCATTGACCTTGTGAAAAGTACATCCTGGCCCTTTGGAACGAAGGGT  
 ACATCATGGGCTTTATCAGTAAGGAGCGGGAGCGGCCATCTTGAGCACTAAGCCTCCAGGCACCTTCTC  
 GCTAAGATTCAAGTAAAGCAGCAAGAAGGAGGGTCACTTTCACTTGGGTGGAGAAGGACATCAGCGGT  
 AAGACCCAGATCCAGTCCGTGGAACCATACACAAAGCAGCAGCTGAACAACATGTCATTTGCTGAAATCA  
 TCATGGGCTATAAGATCATGGATGCTACCAATATCCTGGTGTCTCCACTGGTCTATCTCTATCCTGACAT  
 TCCAAGGAGGAGGCAATTCGAAAGTATTGTGGCCAGAGAGCCAGGAGCATCCTGAAGCTGACCCAGGT  
 AGCGCTGCCCCATACCTGAAGACCAAGTTTATCTGTGTGACACCATTATTGATGCAGTTTGAAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC212394 representing NM\_213662  
Red=Cloning site Green=Tags(s)

MAQWNQLQQLDTRYLEQLHLQLYSDSFPMELRQFLAPWIESQDWAYAASKESHATLVFHNLGGEIDQQYSR  
 FLQESNVLQYHNLRRIKQFLQSRYLEKPMIARIVARCLWEESRLLQTAATAAQGGQANHPTAAVVTEK  
 QQMLEQHLQDVRKRVQDLEQKMKVVENLQDDDFNYKTLKSOQDMQDLNGNNSVTRQKMQQLEQMLTAL  
 DQMRRSIVSELAGLLSAMEYVQKTLTDEELADWKRRQQIACIGGPPNICLDRLLENWITSLAESQLQTRQQ  
 IKKLEELQQKVSYKGDPIVQHRPMLERIVELFRNLKMSAFVVERQPCMPMHPDRPLVIKTGVQFTTKVR  
 LLVKFPELNYQLKIKVCIDKDSGDVAALRGRKFNILGNTNKVMNMEESNNGSLSAEFKHLTLREQRCGN  
 GGRANCASLIVTEELHLITFETEVYHQGLKIDLETHSLPVVVISNICQMPNAWASILWYNMLTNNPKNV  
 NFFTKPPIGTWDQVAEVLWQFSSTTKRGLSIEQLTTLAEKLLGPGVNYSGCQITWAKFCKENMAGKGS  
 FWWLDNIIDLVKKYILALWNEGYIMGFISKERERAILSTKPPGTFLRFSESSKEGGVTFWVEKDISG  
 KTQIQSVEPYTKQLNNSFAEIIIMGYKIMDATNILVSPLVYLYPDIPKEEAFGKYCRPESQEHPEADPG  
 SAAPYLKTKFICVTPFIDAVWK

TRTRPLEQKLISEEDLANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6162\\_b10.zip](https://cdn.origene.com/chromatograms/mk6162_b10.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_213662

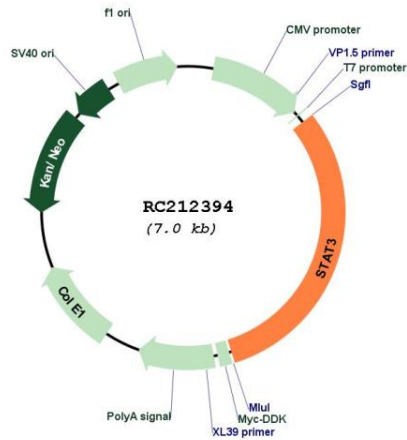
**ORF Size:** 2166 bp

**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](#)

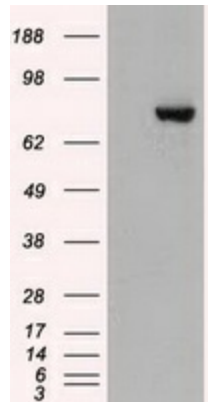
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_213662.2</a>
<b>RefSeq Size:</b>	4819 bp
<b>RefSeq ORF:</b>	2169 bp
<b>Locus ID:</b>	6774
<b>UniProt ID:</b>	<a href="#">P40763</a>
<b>Cytogenetics:</b>	17q21.2
<b>Protein Families:</b>	Druggable Genome, Transcription Factors
<b>Protein Pathways:</b>	Acute myeloid leukemia, Adipocytokine signaling pathway, Chemokine signaling pathway, Jak-STAT signaling pathway, Pancreatic cancer, Pathways in cancer
<b>MW:</b>	82.9 kDa
<b>Gene Summary:</b>	The protein encoded by this gene is a member of the STAT protein family. In response to cytokines and growth factors, STAT family members are phosphorylated by the receptor associated kinases, and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. This protein is activated through phosphorylation in response to various cytokines and growth factors including IFNs, EGF, IL5, IL6, HGF, LIF and BMP2. This protein mediates the expression of a variety of genes in response to cell stimuli, and thus plays a key role in many cellular processes such as cell growth and apoptosis. The small GTPase Rac1 has been shown to bind and regulate the activity of this protein. PIAS3 protein is a specific inhibitor of this protein. This gene also plays a role in regulating host response to viral and bacterial infections. Mutations in this gene are associated with infantile-onset multisystem autoimmune disease and hyper-immunoglobulin E syndrome. [provided by RefSeq, Aug 2020]

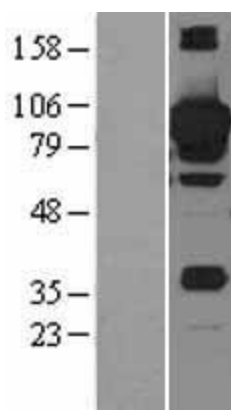
Product images:



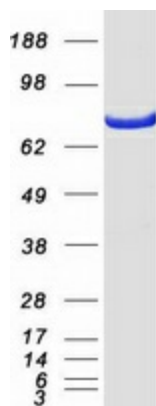
Circular map for RC212394



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY STAT3 (Cat# RC212394, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-STAT3 (Cat# [TA500177]). Positive lysates [LY403728] (100ug) and [LC403728] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY403728]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212394 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified STAT3 protein (Cat# [TP312394]). The protein was produced from HEK293T cells transfected with STAT3 cDNA clone (Cat# RC212394) using MegaTran 2.0 (Cat# [TT210002]).