

## Product datasheet for **KN316845RB**

### Stat3 Mouse Gene Knockout Kit (CRISPR)

#### Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 RFP-BSD donor, 1 scramble control
Donor DNA:	RFP-BSD
Symbol:	Stat3
Locus ID:	20848
Components:	<p><b>KN316845G1</b>, Stat3 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GTACAGCGACAGCTTCCCCA</p> <p><b>KN316845G2</b>, Stat3 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GCAGCTGGACACACGCTACC</p> <p><b>KN316845RBD</b>, donor DNA containing left and right homologous arms and RFP-BSD functional cassette.</p>

Homologous arm and RFP-BSD sequences:

pUC vector backbone in gray; Left arm sequence in blue; RFP-BSD in green; Right arm in violet

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CCATATGGGT GCTGGGAATT GAACTTGGTC CTCTGCAAGA GCAACAAGTG CATTAAACTA CTGAACCAGC
TCTCCAGCAC ATGTGCTCTC TCTCCCCTG TGTATGTGTG GGAATGGAGG TGGTGGCGAG GGTTTAGGGC
TCAGGCTGGC CTTGACCTGT CTGTCATGAT ATCATAGGAG TTCTGGGATT ACAGGCATGA GCCGCTGTGC
CTGGCTTCAA AGTAGATTCT AGAACTTAAA ATCACACCTA ATTGTAACAG AAGAAATTGC GTGGCAGCCT
TGAATGGCAG CTCATGCCTG AAATTCAAGC ACTTAGGAGG CAGAGGTAGG AAATAACAAG GCTAGCCTGA
GACCCTGTTT TAGAAAATCA AGGACCTGGA GACTAGCTCA GTGGTGGAGA ACTTGTATAG TGTTTGATCC
CCAGCATCAG GAGTGGGAG AGCTGTGGTG GTAGGATTTG TGAATGCAAA CACGTATTAT TCAAAGGACT
ACAAAAACA TACAAGCTCC TTTTCAGAGT CACCAGGTA TCCCCTATGA GACTTGTGG TGACCACATA
TATATTTTGG CTTACAGTCG AGACCCCTGA CTGCAGCAGG AGACTGGTGA GTCCTTCTTG AAAACTCCCT
GACTTGGGGG GTTTAGCATT GAGTCAGGAC ACAACCTGTT CTAGGTTTAC ACCTTACTAA CCCTTTGATC
AGACATGTGA GGCAGGTGC GGGGAAGGA TTGGGAGAAC AGAGGTAAGT TAGTCTCTTA ACGCATCTGT
TCACAGTGCA TATGACAGCG GCCTCTTTC ACTTTGAAAC AGCTTGCTGG TAGATGTTTT GGAGTCAGGT
TTGAGTCTCA CTTACTTGGT GAGATCTCTG CACATTTTGA GTCTAGAACA GTGAGATACA GATGTTTTTC
CTTTTTAAAT CTAAGAATTC TATGTCAGGT AGAAATTGGG GTCTACCACA CACGTGCTT CCCCTGGTAA
AGAGGAGGCA TGGGATGAGG AGGGAAGTAG AGGCATAGAG GAAATGCCAG CTGTTTACCT CACTTTAGTG
TATTCAGGCC CGTGTGCTAG TTCTGGCCTA AGTCAGCCCT ATCTGCGTGT GACCTACTTT TTCCAGAAGA
CATACTGAT TTGGTGATGG GCCAAAGAGG TGTGGATCAC ACCTCAGCCT GGCATTGCTC ATTAAGCTAA
GAAGCACTTA

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**GE100003**, scramble sequence in pCas-Guide vector



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**Disclaimer:** These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

**RefSeq:** [NM\\_011486](#), [NM\\_213659](#), [NM\\_213660](#)

**UniProt ID:** [P42227](#)

**Synonyms:** 1110034C02Rik; Aprf; AW109958

**Summary:** 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. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Sep 2015]

### Product images:

