

Product datasheet for **MC220094**

Foxk2 (NM_001080932) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Foxk2 (NM_001080932) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Foxk2
Synonyms:	1110054H05Rik; 5730434B08Rik; 6230415M23Rik; ILF; Ilf1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC220094 representing NM_001080932
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGGCGCGCGCGGCTCTCGGGCGGGCGCCCTCCCGGGCGGCGGGCGGGGCGGGCGGGAT
 CCCCGCCGGGCGGCTGGGCCGTGGCGCGGCTCGAAGGCCGCGAGTTCGAGTACCTCATGAAGAAGCGGTC
 GGTGACCATCGGCCCAACTCATCGCAGGGCTCGGTAGATGTGAGCATGGCCACTCGAGCTTCATCTCG
 CGGCGCCACTGGAGATCTTACGCCCCCGGGCGGGCCATAGCGCGGCCGCCCGGAACCCGCGCAGC
 CCCGGCCGACGCGGGCGGCGACTTCTACCTGCGCTGTCTCGGAAGAACGGCGTGTTCGTGGACGGGT
 GTTCCAGCGGGGGGGCGCCGCGCTGCAGCTGCCGCGGTGTGCACTTTCAGGTTTCCGAGCACAAAT
 ATCAAGATAACATTCACAGCCCTATCCAGCGAGAAGAGAGAAGCAGGAAGCACCTGAGTCGCCAGTGA
 AGCCTGTGCAGCCACACATCTACCCCTGACCATCAACATTCAGACACGATGGCCACCTCATCAGCCC
 CCTTCTTCCCCACGGAACTATCAGTGTGCCAACTCTGCCATCCAGTCTCGCGGAGCAGGGTCT
 TCAGGGTACAAAGTGGGCGGTGTGATGCCATCGGACCTCAGTTTAAATGGCTGACAACCTCCAGCCAGAAA
 ATGAAAAGGAAGCGTCAGGTGGAGACAGCCAAAGGATGACTCAAAGCCACCTTACTCCTATGCACAGTT
 GATAGTACAAGCAATTACAATGGCTCCTGATAAACAACCTACCCTAAATGGGATTTATACACACATCACT
 AAAAATCTCCATACTACAGGACTGCGGACAAGGGCTGGCAGAATTCAATTCGCCACAATCTCTCTCTGA
 ACCGTTATTTTCATCAAAGTGCCACGTTCCAGGAAGAACCAGGCAAGGCTCCTTCTGGAGGATAGACCC
 TGCTCCGAGAGCAAGCTGGTAGAGCAGGCTTTTAGGAAAAGACGGCCTAGGGCGTGCCTTGTCTTAGA
 ACCCCCTGGGACCTCTCTCTTAGGAGTGGCCAGCTTCTCCAACCATGCCGGAGTGTCTGTCTGCTC
 ACTCCAGTGGCGCCAGACCCCGAGAGCCTGTGAGGGAGGGCTCCCCAGCCCCCTGGAGCCTGAGCC
 TGGCGCCTCACAGCCCAAGCTTGCCGTCATCCAGGAGGCCAGGTTTGGCCAGAGTGCACCGGGTCACT
 CTCTCTAGTCAGCCCGTCTTAATTAAGTGTCCAGCGGCAGCTACCCCGGCCATTAAGCCTGTACCTACA
 CTGTTGCAACCCAGTGACCACACCCACCTCTCAGCCACCTGTTGTGCAGACGGTCCATGTTGTTTCATCA
 GATACCAGCAGTGTGAGTACCAGTGTGGCTGGACTGGCCCCAGCAAACACATACAGTTGCTGGACAA
 GCTGTGGTCACTCAGGCTGCGGTGCTGGCTCCTCCTAACCTGAACCACAAGAGAATGGCGACCACAGAG
 AAGTCAGAGTAAAGTAGAACCTGTCCCTGCAATTAGCCAGCTACACTAGGCGTGTAGCCGAATCAT
 CCAGACATCACAGGACCCCTGTTAGACAGTACCATAGTGCAGCAGGCGCCTTAGGTAACACCAG
 CTTCCAATAAAAAGTGAACGAAAACGGAGCTCATGTGGTACCCATGCCTACAGCAGTGCACAGCCAGG
 TGAACAATGCAGCAGCAAGTCTCTCCATATGTTGGCCACCCATGCATCAGCATCGGCATCCCTGCCAC
 AAAGCGCCAGAACGGTGACCAGGAGAGAGCCAGAGCTCAAGCGAGTTAAAGCAGAAGATGGCGAGAGC
 ATTGTCATTGCCCTGAGTGTGGATGCACCACCAGCAGCTGTGAGAGAAAAGGCAATCCAGAACTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM_001080932
- Insert Size:** 1956 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:	<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:	NM_001080932.2 , NP_001074401.2
RefSeq Size:	5032 bp
RefSeq ORF:	1956 bp
Locus ID:	68837
UniProt ID:	Q3UCQ1
Cytogenetics:	11 E2
Gene Summary:	<p>Transcriptional regulator involved in different processes such as glucose metabolism, aerobic glycolysis and autophagy (PubMed:25402684, PubMed:29861159, PubMed:30700909). Recognizes and binds the forkhead DNA sequence motif (5'-GTAAACA-3') and can both act as a transcription activator or repressor, depending on the context (PubMed:25402684, PubMed:29861159, PubMed:30700909). Together with FOXK1, acts as a key regulator of metabolic reprogramming towards aerobic glycolysis, a process in which glucose is converted to lactate in the presence of oxygen (PubMed:30700909). Acts by promoting expression of enzymes for glycolysis (such as hexokinase-2 (HK2), phosphofructokinase, pyruvate kinase (PKLR) and lactate dehydrogenase), while suppressing further oxidation of pyruvate in the mitochondria by up-regulating pyruvate dehydrogenase kinases PDK1 and PDK4 (PubMed:30700909). Probably plays a role in gluconeogenesis during overnight fasting, when lactate from white adipose tissue and muscle is the main substrate (PubMed:30700909). Together with FOXK1, acts as a negative regulator of autophagy in skeletal muscle: in response to starvation, enters the nucleus, binds the promoters of autophagy genes and represses their expression, preventing proteolysis of skeletal muscle proteins (PubMed:25402684). In addition to the 5'-GTAAACA-3' DNA motif, also binds the 5'-TGANTCA-3' palindromic DNA motif, and co-associates with JUN/AP-1 to activate transcription (By similarity). Also able to bind to a minimal DNA heteroduplex containing a G/T-mismatch with 5'-TRT[G/T]NB-3' sequence (By similarity). Binds to NFAT-like motifs (purine-rich) in the IL2 promoter (By similarity). Positively regulates WNT/beta-catenin signaling by translocating DVL proteins into the nucleus (By similarity).[UniProtKB/Swiss-Prot Function]</p>