

## Product datasheet for **KN306098**

### Foxo3 Mouse Gene Knockout Kit (CRISPR)

#### Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 GFP-puro donor, 1 scramble control
Donor DNA:	GFP-puro
Symbol:	Foxo3
Locus ID:	56484
Components:	<p><b>KN306098G1</b>, Foxo3 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CCCGCTCTCTCCGCTCGAAG</p> <p><b>KN306098G2</b>, Foxo3 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GTCGGCCACGCTCCTGTACG</p> <p><b>KN306098D</b>, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p> <p><b>GE100003</b>, scramble sequence in pCas-Guide vector</p>
RefSeq:	<u>NM_019740</u>
UniProt ID:	<u>Q9WVH4</u>
Synonyms:	1110048B16Rik; 2010203A17Rik; C76856; Fkhr2; FKHL1; Foxo3a
Summary:	<p>Transcriptional activator that recognizes and binds to the DNA sequence 5'-[AG]TAAA[TC]A-3' and regulates different processes, such as apoptosis and autophagy (PubMed:18054316, PubMed:18054315, PubMed:23805378). Acts as a positive regulator of autophagy in skeletal muscle: in starved cells, enters the nucleus following dephosphorylation and binds the promoters of autophagy genes, such as GABARAP1L, MAP1LC3B and ATG12, thereby activating their expression, resulting in proteolysis of skeletal muscle proteins (PubMed:18054316, PubMed:18054315, PubMed:25402684). Triggers apoptosis in the absence of survival factors, including neuronal cell death upon oxidative stress (By similarity). Participates in post-transcriptional regulation of MYC: following phosphorylation by MAPKAPK5, promotes induction of miR-34b and miR-34c expression, 2 post-transcriptional regulators of MYC that bind to the 3' UTR of MYC transcript and prevent its translation (By similarity). In response to metabolic stress, translocates into the mitochondria where it promotes mtDNA transcription (PubMed:23283301).[UniProtKB/Swiss-Prot Function]</p>



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## Product images:

