

## Product datasheet for **KN215643RB**

### ULK1 Human 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:	ULK1
Locus ID:	8408
Components:	<b>KN215643G1</b> , ULK1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002) <b>KN215643G2</b> , ULK1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) <b>KN215643RBD</b> , donor DNA containing left and right homologous arms and RFP-BSD functional cassette. <b>GE100003</b> , scramble sequence in pCas-Guide vector

**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\\_003565](#)

**UniProt ID:** [O75385](#)

**Synonyms:** ATG1; ATG1A; hATG1; UNC51; Unc51.1

**Summary:** Serine/threonine-protein kinase involved in autophagy in response to starvation. Acts upstream of phosphatidylinositol 3-kinase PIK3C3 to regulate the formation of autophagophores, the precursors of autophagosomes. Part of regulatory feedback loops in autophagy: acts both as a downstream effector and negative regulator of mammalian target of rapamycin complex 1 (mTORC1) via interaction with RPTOR. Activated via phosphorylation by AMPK and also acts as a regulator of AMPK by mediating phosphorylation of AMPK subunits PRKAA1, PRKAB2 and PRKAG1, leading to negatively regulate AMPK activity. May phosphorylate ATG13/KIAA0652 and RPTOR; however such data need additional evidences. Plays a role early in neuronal differentiation and is required for granule cell axon formation. May also phosphorylate SESN2 and SQSTM1 to regulate autophagy (PubMed:25040165). [UniProtKB/Swiss-Prot Function]



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## Product images:

