

## Product datasheet for **RC215643L2V**

### ULK1 (NM\_003565) Human Tagged ORF Clone Lentiviral Particle

#### Product data:

Product Type:	Lentiviral Particles
Product Name:	ULK1 (NM_003565) Human Tagged ORF Clone Lentiviral Particle
Symbol:	ULK1
Synonyms:	ATG1; ATG1A; hATG1; UNC51; Unc51.1
Mammalian Cell Selection:	None
Vector:	pLenti-C-mGFP (PS100071)
Tag:	mGFP
ACCN:	NM_003565
ORF Size:	3150 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(RC215643).
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. <a href="#">More info</a>
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
RefSeq:	<a href="#">NM_003565.1</a>
RefSeq Size:	5228 bp
RefSeq ORF:	3153 bp
Locus ID:	8408
UniProt ID:	<a href="#">O75385</a>
Cytogenetics:	12q24.33
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	mTOR signaling pathway, Regulation of autophagy



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**MW:** 112.4 kDa

**Gene 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]