

Active Recombinant Human ULK1, GST-tagged

Cat. No. ULK1-1507H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human ULK1 (1-649) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.
Species	Human
Source	Sf9 Cells
ProteinLength	1-649 aa
Description	ULK1 is a serine/threonine protein kinase that plays critical role during initial stages of autophagy which is a vital response to nutrient starvation. The conserved C-terminal domain (CTD) of ULK1 controls the regulatory function and localization of the protein. Knockdown of ULK1 inhibits the autophagic response as well as inhibiting rapamycin-induced autophagy consistent with a role downstream of mTOR. ULK1 forms a complex with FIP200 and ATG13 and this complex is essential for starvation-induced autophagy. Both FIP200 and ATG13 are critical for correct localization of ULK1 to the pre-autophagosome and stability of ULK1 protein. ULK1 is phosphorylated by the mTOR pathway in a nutrient starvation-regulated manner.
Form	Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.
Bio-activity	50 nmol/min/mg
Molecular Mass	~125 kDa

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Purity	>70%
Applications	Kinase Assay, Western Blot
Storage	Store at –70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. Avoid freeze/thaw cycles.
Concentration	0.1µg/µl
GENE INFORMATION	
Gene Name	ULK1 unc-51-like kinase 1 (C. elegans) [Homo sapiens]
Official Symbol	ULK1
Synonyms	ULK1; unc-51-like kinase 1 (C. elegans); unc 51 (C. elegans) like kinase 1; serine/threonine-protein kinase ULK1; ATG1; ATG1 autophagy related 1 homolog (S. cerevisiae); ATG1A; ATG1 autophagy related 1 homolog; autophagy-related protein 1 homolog; UNC51; hATG1; Unc51.1; FLJ38455; FLJ46475;
Gene ID	8408
mRNA Refseq	NM_003565
Protein Refseq	NP_003556
MIM	603168
UniProt ID	O75385
Chromosome	12q24.3

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Location	
Pathway	Regulation of autophagy, organism-specific biosystem; Regulation of autophagy, conserved biosystem; Senescence and Autophagy, organism-specific biosystem; mTOR signaling pathway, organism-specific biosystem; mTOR signaling pathway, conserved biosystem;
Function	ATP binding; nucleotide binding; protein binding; protein complex binding; protein serine/threonine kinase activity; protein serine/threonine kinase activity;

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