

## Product datasheet for **KN215023LP**

### IRE1 (ERN1) Human Gene Knockout Kit (CRISPR)

#### Product data:

|               |   |
|---------------|---|
| Product Type: | Knockout Kits (CRISPR)  |
| Format:       | 2 gRNA vectors, 1 Luciferase-Puro donor, 1 scramble control   |
| Donor DNA:    | Luciferase-Puro   |
| Symbol:       | IRE1  |
| Locus ID:     | 2081  |
| Components:   | <b>KN215023G1</b> , IRE1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)<br><b>KN215023G2</b> , IRE1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)<br><b>KN215023LPD</b> , donor DNA containing left and right homologous arms and Luciferase-Puro functional cassette. |

Homologous arm and Luciferase-Puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **Luciferase-Puro in green**; **Right arm in violet**

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AACGATCGGA GGACCGAAGG AGCTAACCGC TTTTTTGAC AACATGGGGG ATCATGTAAC TCGCCTT

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**GE100003**, 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\\_001433](#), [NM\\_152461](#)

**UniProt ID:**

[O75460](#)

**Synonyms:**

hIRE1p; IRE1; IRE1a; IRE1P

**Summary:**

This gene encodes the transmembrane protein kinase inositol-requiring enzyme 1. The encoded protein contains two functional catalytic domains, a serine/threonine-protein kinase domain and an endoribonuclease domain. This protein functions as a sensor of unfolded proteins in the endoplasmic reticulum (ER) and triggers an intracellular signaling pathway termed the unfolded protein response (UPR). The UPR is an ER stress response that is conserved from yeast to mammals and activates genes involved in degrading misfolded proteins, regulating protein synthesis and activating molecular chaperones. This protein specifically mediates the splicing and activation of the stress response transcription factor X-box binding protein 1. [provided by RefSeq, Aug 2017]

**Product images:**
