

## Product datasheet for **KN221385BN**

### IREB2 Human Gene Knockout Kit (CRISPR)

#### Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 mBFP-Neo donor, 1 scramble control
Donor DNA:	mBFP-Neo
Symbol:	IREB2
Locus ID:	3658
Components:	<b>KN221385G1</b> , IREB2 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002) <b>KN221385G2</b> , IREB2 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) <b>KN221385BND</b> , donor DNA containing left and right homologous arms and mBFP-Neo 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\\_001320941](#), [NM\\_001320942](#), [NM\\_001320943](#), [NM\\_004136](#), [NM\\_001354994](#)

**UniProt ID:** [P48200](#)

**Synonyms:** ACO3; IRP2; IRP2AD

**Summary:** The protein encoded by this gene is an RNA-binding protein that acts to regulate iron levels in the cells by regulating the translation and stability of mRNAs that affect iron homeostasis under conditions when iron is depleted. When iron levels are low, this protein binds to iron-responsive elements (IRES), stem-loop structures located either in the 5' or 3' UTRs. Binding to the 5' UTR represses translation, while binding to the 3' UTR inhibits mRNA degradation. When iron is found in the cell, this protein is degraded in a F-box and leucine rich repeat protein 5-dependent manner. Variants in this gene have been associated with lung cancer and chronic obstructive pulmonary disease (COPD). Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Aug 2017]



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## Product images:

