

## Product datasheet for **KN211132**

### GLUD1 Human Gene Knockout Kit (CRISPR)

#### Product data:

**Product Type:** Knockout Kits (CRISPR)  
**Format:** 2 gRNA vectors, 1 GFP-puro donor, 1 scramble control  
**Donor DNA:** GFP-puro  
**Symbol:** GLUD1  
**Locus ID:** 2746  
**Components:** **KN211132G1**, GLUD1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CGCTGTTGCTGTCCCCGGGCC  
**KN211132G2**, GLUD1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CCGGGCCCCAGCCCAGCAACG  
**KN211132D**, donor DNA containing left and right homologous arms and GFP-puro functional cassette.

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **GFP-puro in green**; **Right arm in violet**

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TGGGGGATCA TGTAACCTCG CTT

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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\\_001318900](#), [NM\\_001318901](#), [NM\\_001318902](#), [NM\\_001318904](#), [NM\\_001318905](#),  
[NM\\_001318906](#), [NM\\_005271](#)

**UniProt ID:**

[P00367](#)

**Synonyms:**

GDH; GDH1; GLUD

**Summary:**

This gene encodes glutamate dehydrogenase, which is a mitochondrial matrix enzyme that catalyzes the oxidative deamination of glutamate to alpha-ketoglutarate and ammonia. This enzyme has an important role in regulating amino acid-induced insulin secretion. It is allosterically activated by ADP and inhibited by GTP and ATP. Activating mutations in this gene are a common cause of congenital hyperinsulinism. Alternative splicing of this gene results in multiple transcript variants. The related glutamate dehydrogenase 2 gene on the human X-chromosome originated from this gene via retrotransposition and encodes a soluble form of glutamate dehydrogenase. Related pseudogenes have been identified on chromosomes 10, 18 and X. [provided by RefSeq, Jan 2016]

Product images:

