

Product datasheet for **KN209258**

Niemann Pick C1 (NPC1) 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:	Niemann Pick C1
Locus ID:	4864
Components:	<p>KN209258G1, Niemann Pick C1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GGTGAGCGGTCGCCGCCAC</p> <p>KN209258G2, Niemann Pick C1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GCTGCTACTGTGTCCAGCGC</p> <p>KN209258D, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p>

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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GGGGATCATG TAACTCGCCT T

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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_000271](#)

UniProt ID:

[O15118](#)

Synonyms:

NPC

Summary:

This gene encodes a large protein that resides in the limiting membrane of endosomes and lysosomes and mediates intracellular cholesterol trafficking via binding of cholesterol to its N-terminal domain. It is predicted to have a cytoplasmic C-terminus, 13 transmembrane domains, and 3 large loops in the lumen of the endosome - the last loop being at the N-terminus. This protein transports low-density lipoproteins to late endosomal/lysosomal compartments where they are hydrolyzed and released as free cholesterol. Defects in this gene cause Niemann-Pick type C disease, a rare autosomal recessive neurodegenerative disorder characterized by over accumulation of cholesterol and glycosphingolipids in late endosomal/lysosomal compartments.[provided by RefSeq, Aug 2009]

Product images:

