

## **Product datasheet for KN222840BN**

### Product datasileet for KN222040BN

# **CYP27B1 Human Gene Knockout Kit (CRISPR)**

1594

**Product data:** 

Locus ID:

**Product Type:** Knockout Kits (CRISPR)

**Format:** 2 gRNA vectors, 1 mBFP-Neo donor, 1 scramble control

Donor DNA: mBFP-Neo Symbol: CYP27B1

**Components: KN222840G1**, CYP27B1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

KN222840G2, CYP27B1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)

KN222840BND, donor DNA containing left and right homologous arms and mBFP-Neo

functional cassette.

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 000785

 UniProt ID:
 O15528

Synonyms: CP2B; CYP1; CYP1alpha; CYP27B; P450c1; PDDR; VDD1; VDDR; VDDRI; VDR

**Summary:** This gene encodes a member of the cytochrome P450 superfamily of enzymes. The

cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. The protein encoded

by this gene localizes to the inner mitochondrial membrane where it hydroxylates 25-

hydroxyvitamin D3 at the 1alpha position. This reaction synthesizes 1alpha,25-dihydroxyvitamin D3, the active form of vitamin D3, which binds to the vitamin D receptor

and regulates calcium metabolism. Thus this enzyme regulates the level of biologically active vitamin D and plays an important role in calcium homeostasis. Mutations in this gene can

result in vitamin D-dependent rickets type I. [provided by RefSeq, Jul 2008]



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# **Product images:**

#### Donor Vector Edited Chromosome



RFP, Luc, and mBFP will be under native gene promoter