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# Product datasheet for KN209151BN

## Dystrophia myotonica protein kinase (DMPK) 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:** | Dystrophia myotonica protein kinase |
| **Locus ID:** | 1760 |
| **Components:** | **KN209151G1**, Dystrophia myotonica protein kinase gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)<br>**KN209151G2**, Dystrophia myotonica protein kinase gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)<br>**KN209151BND**, donor DNA containing left and right homologous arms and mBFP-Neo functional cassette.<br>**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_001081560, NM_001081562, NM_001081563, NM_001288764, NM_001288765, NM_001288766, NM_004409 |
| **UniProt ID:** | Q09013 |
| **Synonyms:** | DM; DM1; DM1PK; DMK; MDPK; MT-PK |

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**Summary:** The protein encoded by this gene is a serine-threonine kinase that is closely related to other kinases that interact with members of the Rho family of small GTPases. Substrates for this enzyme include myogenin, the beta-subunit of the L-type calcium channels, and phospholemman. The 3' untranslated region of this gene contains 5-38 copies of a CTG trinucleotide repeat. Expansion of this unstable motif to 50-5,000 copies causes myotonic dystrophy type I, which increases in severity with increasing repeat element copy number. Repeat expansion is associated with condensation of local chromatin structure that disrupts the expression of genes in this region. Several alternatively spliced transcript variants of this gene have been described, but the full-length nature of some of these variants has not been determined. [provided by RefSeq, Jul 2016]

## Product images: