

## Product datasheet for **KN318311RB**

### Trpv4 Mouse Gene Knockout Kit (CRISPR)

#### Product data:

|               |   |
|---------------|---|
| Product Type: | Knockout Kits (CRISPR)  |
| Format:       | 2 gRNA vectors, 1 RFP-BSD donor, 1 scramble control   |
| Donor DNA:    | RFP-BSD   |
| Symbol:       | Trpv4   |
| Locus ID:     | 63873   |
| Components:   | <b>KN318311G1</b> , Trpv4 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)<br><b>KN318311G2</b> , Trpv4 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)<br><b>KN318311RBD</b> , donor DNA containing left and right homologous arms and RFP-BSD functional cassette.<br><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:       | <a href="#">NM_022017</a>   |
| UniProt ID:   | <a href="#">Q9EPK8</a>  |
| Synonyms:     | 0610033B08Rik; OTRPC4; Trp12; VR-OAC; VRL-2; VROAC  |



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**Summary:**

Non-selective calcium permeant cation channel involved in osmotic sensitivity and mechanosensitivity (PubMed:11094154). Activation by exposure to hypotonicity within the physiological range exhibits an outward rectification (PubMed:12093812, PubMed:14691263, PubMed:16368742, PubMed:16571723). Also activated by heat, low pH, citrate and phorbol esters (PubMed:14691263). Increase of intracellular Ca(2+) potentiates currents. Channel activity seems to be regulated by a calmodulin-dependent mechanism with a negative feedback mechanism (By similarity). Acts as a regulator of intracellular Ca(2+) in synoviocytes (By similarity). Plays an obligatory role as a molecular component in the nonselective cation channel activation induced by 4-alpha-phorbol 12,13-didecanoate and hypotonic stimulation in synoviocytes and also regulates production of IL-8 (By similarity). Together with PKD2, forms mechano- and thermosensitive channels in cilium (PubMed:18695040). Promotes cell-cell junction formation in skin keratinocytes and plays an important role in the formation and/or maintenance of functional intercellular barriers (PubMed:20413591). Negatively regulates expression of PPARGC1A, UCP1, oxidative metabolism and respiration in adipocytes (PubMed:23021218). Regulates expression of chemokines and cytokines related to proinflammatory pathway in adipocytes (PubMed:23021218). Together with AQP5, controls regulatory volume decrease in salivary epithelial cells (PubMed:16571723). Required for normal development and maintenance of bone and cartilage (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**
