

## Product datasheet for **KN302835**

### Ccr2 Mouse 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:	Ccr2
Locus ID:	12772
Components:	<b>KN302835G1</b> , Ccr2 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: AGTATGCCGTGGATGAACTG <b>KN302835G2</b> , Ccr2 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GAGATGTTGATAGTATGCCG <b>KN302835D</b> , 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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AGAAGTAAGT TGGCCGCACT GTTATCACTC ATGGTTATGG CAGCACTGCA TAATTCTCTT ACTGTCATGC
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TACAGGCATC GTGGTGTCAC GCTCGTCGTT TGGTATGGCT TCATTCAGCT CCGGTTCCCA ACGATC

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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\\_009915](#)

**UniProt ID:**

[P51683](#)

**Synonyms:**

Cc-ckr-2; Ccr2a; Ccr2b; Ckr2; Ckr2a; Ckr2b; Cmkbr2; mJe-r

**Summary:**

Key functional receptor for CCL2 but can also bind CCL7 and CCL12 chemokines (PubMed:8631787, PubMed:8662823, PubMed:8996246). Its binding with CCL2 on monocytes and macrophages mediates chemotaxis and migration induction through the activation of the PI3K cascade, the small G protein Rac and lamellipodium protrusion (By similarity). Also acts as a receptor for the beta-defensin DEFB106A/DEFB106B (By similarity). Regulates the expression of T-cell inflammatory cytokines and T-cell differentiation, promoting the differentiation of T-cells into T-helper 17 cells (Th17) during inflammation (PubMed:28507030). Facilitates the export of mature thymocytes by enhancing directional movement of thymocytes to sphingosine-1-phosphate stimulation and up-regulation of S1P1R expression; signals through the JAK-STAT pathway to regulate FOXO1 activity leading to an increased expression of S1P1R (PubMed:29930553). Plays an important role in mediating peripheral nerve injury-induced neuropathic pain (PubMed:29993042). Increases NMDA-mediated synaptic transmission in both dopamine D1 and D2 receptor-containing neurons, which may be caused by MAPK/ERK-dependent phosphorylation of GRIN2B/NMDAR2B (PubMed:29993042). Mediates the recruitment of macrophages and monocytes to the injury site following brain injury (PubMed:24806994, PubMed:29632244).[UniProtKB/Swiss-Prot Function]

**Product images:**
