OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for KN307164

Gper1 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: Gper1

Locus ID: 76854

Components: **KN307164G1**, Gper1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: AGATCTACCTAGGTCCCGTG
KN307164G2, Gper1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TGCCCCGGGGAACCTCACTG
KN307164D, 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

```
TTGAGAAAGG CTGGGTTTTT CCCTTCCCAT GTCACGTCTC TTTCCAACAG CTGCTGAAGT TAATGAGACT
TCCTGTCTCG ACAAACAGTA GTTTTCCTCA AATTCCCACA CCACACACTC ACGGTATTTC ACGGGCCAGT
GATCTGACTG GTCCCACTAC ATCTCCCATG ACTCACAGAC TGTCACCAAC TGTGGGCGCT CTTAGGGAAC
ATAAAGGAAC ACTCCACGTC TATCCACGTC TATCTCTTCT GCTCCAGCTC AGGGGGGTGG CGAAAGCCAG
AGTCCAGGTG GACCCCGTTG TCACTCATGC ACCACACCTG GCTCCTTCAG GATGCTCAGG GTTCTAGATG
CTAAGTCTTG CCCCGTCTGC TTCTACAGGT GCCCAGAAGG TGAGCAGGCA GCAGGTGTGC CTGCCCAGCA
CCAGCCCAGA CATCAGACAC CCTGTCCACC CTTCTGGTTT TCTGAGACTA ACAGGCTCCC AGGACGATTC
TTCCTGCCTC ACAAATGCCT GGTTTATCTT TCTTTGTGAA GATGGAGCTG TCACATAAAA CAGCTTTCTG
TGACCCTTTC AGCAAATCCT GAAAACTGCC GAGGGAAGCC ATCAGCAGTA CGTGATTGCC CTCTTCCTCT
CCTGCCTCTA CACCATCTTC CTCTTTCCTA TTGGCTTTGT GGGCAACATC CTCATCCTGG TGGTGAACAT
CAGCTTCCGG GAGAAGATGA CCATCCCAGA CCTGTACTTC ATCAACCTGG CGGCGGCCGA CCTCATCCTG
GTGGCTGACT CCCTGATTGA GGTGTTCAAC CTGGACGAGC AGTACTACGA CATCGCAGTG CTCTGCACCT
TCATGTCCCT CTTCCTGCAG ATCAACATGT ACAGCAGCGT CTTCTTCCTC ACCTGGATGA GCTTCGACAG
GTACCTAGCG CTGGCCAAGG CCATGCGCTG TGGCCTCTTC CGCACCAAGC ACCACGCACG GCTCAGCTGT
GGCCTCATCT GGATGGCCTC AGTGTCCGCC ACGCTGGTGC CCTTCACAGC GGTGCACCTG CGGCACACGG
AGGAGGCCTG CTTCTGCTTT GCTGATGTCA GGGAGGTGCA GTGGCTGGAG GTCACACTGG GCTTCATCAT
GCCCTTCGCC ATCATTGGCC TCTGCTACTC CCTCATCGTG CGAGCCCTCA TCCGGGCCCA CAGGCACCGC
GGCCTGCGCC
```

GE100003, scramble sequence in pCas-Guide vector

View online »

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.

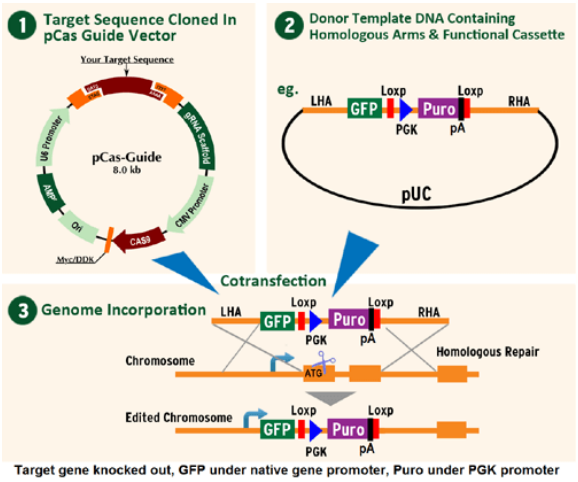
RefSeq: NM_029771

UniProt ID: Q8BMP4

Synonyms: 6330420K13Rik; Ceprl; CMKRL2; FEG-1; GPCR-Br; Gper; Gpr30

Summary: G-protein coupled estrogen receptor that binds to 17-beta-estradiol (E2) with high affinity, leading to rapid and transient activation of numerous intracellular signaling pathways. Stimulates cAMP production, calcium mobilization and tyrosine kinase Src inducing the release of heparin-bound epidermal growth factor (HB-EGF) and subsequent transactivation of the epidermal growth factor receptor (EGFR), activating downstream signaling pathways such as PI3K/Akt and ERK/MAPK. Mediates pleiotropic functions among others in the cardiovascular, endocrine, reproductive, immune and central nervous systems. Has a role in cardioprotection by reducing cardiac hypertrophy and perivascular fibrosis in a RAMP3-dependent manner. Regulates arterial blood pressure by stimulating vasodilation and reducing vascular smooth muscle and microvascular endothelial cell proliferation. Plays a role in blood glucose homeostasis contributing to the insulin secretion response by pancreatic beta cells. Triggers mitochondrial apoptosis during pachytene spermatocyte differentiation. Stimulates uterine epithelial cell proliferation. Enhances uterine contractility in response to oxytocin. Contributes to thymic atrophy by inducing apoptosis. Attenuates TNF-mediated endothelial expression of leukocyte adhesion molecules. Promotes neuritogenesis in developing hippocampal neurons. Plays a role in acute neuroprotection against NMDA-induced excitotoxic neuronal death. Increases firing activity and intracellular calcium oscillations in luteinizing hormone-releasing hormone (LHRH) neurons. Inhibits early osteoblast proliferation at growth plate during skeletal development. Inhibits mature adipocyte differentiation and lipid accumulation. Involved in the recruitment of beta-arrestin 2 ARRB2 at the plasma membrane in epithelial cells. Functions also as a receptor for aldosterone mediating rapid regulation of vascular contractibility through the PI3K/ERK signaling pathway. Involved in cancer progression regulation. Stimulates cancer-associated fibroblast (CAF) proliferation by a rapid genomic response through the EGFR/ERK transduction pathway. Associated with EGFR, may act as a transcription factor activating growth regulatory genes (c-fos, cyclin D1). Promotes integrin alpha-5/beta-1 and fibronectin (FN) matrix assembly in breast cancer cells.[UniProtKB/Swiss-Prot Function]

Product images:



Target gene knocked out, GFP under native gene promoter, Puro under PGK promoter