

## Product datasheet for MR227239

### Gper1 (NM\_029771) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Gper1 (NM_029771) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Gper1
Synonyms:	6330420K13Rik; Cepri; CMKRL2; FEG-1; GPCR-Br; Gper; Gpr30
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR227239 representing NM_029771 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGATGCGACTACTCCAGCCAACTGTTGGGGTGGAGATCTACCTAGGTCCCCTGTGGCCAGCCCTT  
CCAACAGCACCCCTCTGGCCCTCAACTTGTCCCTGGCACTGCGGGAAGATGCCCGGGGAACCTCACTGG  
GGACCTCTCTGAGCATCAGCAGTACGTGATTGCCCTCTCCTCTCCTGCCTCTACACCATTTCTCTTT  
CCTATTGGCTTTGTGGCAACATCCTCATCCTGGTGGTGAACATCAGCTTCCGGGAGAAGATGACCATCC  
CAGACCTGTACTTCATCAACCTGGCGGCGCCGACCTCATCCTGGTGGCTGACTCCCTGATTGAGGTGTT  
CAACCTGGACGAGCAGTACTACGACATCGCAGTGCCTGACCTTCATGTCCCTCTCCTGCAGATCAAC  
ATGTACAGCAGCGTCTTCTTCTCACCTGGATGAGCTTCGACAGGTACCTAGCGCTGGCCAAGGCCATGC  
GCTGTGGCCTCTCCGCACCAAGCACACGCACGGCTCAGCTGTGGCCTCATCTGGATGGCCTCAGTGTG  
CGCCACGCTGGTGCCTTACAGCGGTGCACCTGCGGCACACGGAGGAGGCTGCTTCTGCTTTGCTGAT  
GTCAGGGAGGTGCAGTGGCTGGAGGTACACTGGGCTTCATATGCCCTTCGCCATCATTGGCCTCTGCT  
ACTCCCTCATCGTGGAGCCCTCATCCGGGCCACAGGACCCGCGCCTGCGCCACGCAGGCAGAAAGC  
CCTGAGGATGATCTTCGAGTGGTCTTGTCTTCTCATCTGCTGGTGGCGGAGAAGCTTTCATCAGT  
GTCCACCTACTGCAGTGGACGACGAGGGGACACTCCCTGCAAGCAGTCTTCCGTCACGCCTACCCCT  
TGACAGGCCACATAGTCAACCTTGAGCCTTCTCCAACAGCTGCCTGAATCCCTCATCTACAGCTTCT  
GGGAGAGACCTTCAGGGACAAGCTCAGGCTCTATGTGGAGCAGAAGACGAGCCTGCCGGCTCTGAACCGC  
TTCTGCCATGCCAGCTCAAGGCCGTCATTCCAGACAGCACAGAGCAGTCAAGGTCAGGTTCAAGCAGT  
CTGTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR227239 representing NM\_029771  
Red=Cloning site Green=Tags(s)

MDATTPAQTVGVEIYLPVWPAPSNSTPLALNLSLALREDAPGNLTGDLSEHQYVIALFLSCLYTIFLF  
 PIGFVGNILILVVNISFREKMTIPDLYFINLAAADLILVADSLIEVFNLDEQYYDI AVLCTFM SLFLQIN  
 MYSSVFFLTWMSFD RYLALAKAMRCGLFR TKHHARL SCGLIWMASVSATLVPFTA VHLRHTEEACFCFAD  
 VREVQWLEVT LGFIMPFAIIGLCYSLIVRALIRAHHRHRLRPRRQKALRMIFAVLVVFFICWLPENVFIS  
 VHLLQWTQP GDT PCKQSF RHAYPLTGHIVNLA AF SNSCLNPLIYSFLGETFRDKLRLYVEQKTS L PALNR  
 FCHATLKA VIPDSTEQSEVRFSSAV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9027\\_e05.zip](https://cdn.origene.com/chromatograms/mm9027_e05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_029771

**ORF Size:** 1125 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_029771.3](#), [NP\\_084047.2](#)

**RefSeq Size:** 2525 bp

**RefSeq ORF:** 1128 bp

**Locus ID:** 76854

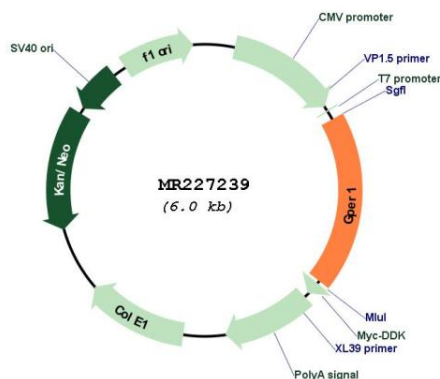
**UniProt ID:** [Q8BMP4](#)

**Cytogenetics:** 5 G2

**MW:** 42.9 kDa

**Gene 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 neurogenesis 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 contractility 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:**

Circular map for MR227239