

Product datasheet for **KN201206**

Sigma1 receptor (SIGMAR1) Human 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:	Sigma1 receptor
Locus ID:	10280
Components:	<p>KN201206G1, Sigma1 receptor gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TCAGCACCGCTGCGACAGCC</p> <p>KN201206G2, Sigma1 receptor gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CAGCCAGAGCCAGACGACCT</p> <p>KN201206D, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p>

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; Left arm sequence in blue; GFP-puro in green; Right arm in violet

```
GATCGTTGGG AACCGGAGCT GAATGAAGCC ATACCAAACG ACGAGCGTGA CACCACGATG CCTGTAGCAA
TGGCAACAAC GTTGCACAAA CTATTAACCTG GCGAACTACT TACTCTAGCT TCCCAGCAAC AATTAATAGA
CTGGATGGAG GCGGATAAAG TTGCAGGACC ACTTCTGCGC TCGGCCCTTC CGGCTGGCTG GTTTATTGCT
GATAAATCTG GAGCCGGTGA GCGTGGTTCT CGCGGTATCA TTGCAGCACT GGGCCAGATG GGTAAGCCCT
CCCGTATCGT AGTTATCTAC ACGACGGGGA GTCAGGCAAC TATGGATGAA CGAAATAGAC AGATCGCTGA
GATAGGTGCC TCACTGATTA AGCATTGGTA ACTGTACAGC CAAGTTTACT CATATATACT TTAGATTGAT
TTAAAACCTC ATTTTAAATT TAAAAGGATC TAGGTGAAGA TCCTTTTTGA TAATCTCATG ACCAAAATCC
CTTAACGTGA GTTTTCGTTC CACTGAGCGT CAGACCCCGT AGAAAAGATC AAAGGATCTT CTTGAGATCC
TTTTTTCTG CGCGTAATCT GCTGCTTGCA AACAAAAAAA CCACCGCTAC CAGCGGTGGT TTGTTTGCCG
GATCAAGAGC TACCAACTCT TTTTCCGAAG GTAAGTGGCT TCAGCAGAGC GCAGATACCA AATACTGTTC
TTCTAGTGTA GCCGTAGTTA GGCCACCACT TCAAGAAGTCT TGTAGCACCG CCTACATACC TCGCTCTGCT
AATCCTGTTA CCAGTGGCTG CTGCCAGTGG CGATAAGTCG TGTCTTACCG GGTGGACTC AAGACGATAG
TTACCGGATA AGGCGCAGCG GTCGGGCTGA ACGGGGGGTT CGTGACACACA GCCCAGCTTG GAGCGAACGA
CCTACACCGA ACTGAGATAC CTACAGCGTG AGCTATGAGA AAGCGCCACG CTTCCGGAAG GGAGAAAGGC
GGACAGGTAT CCGGTAAGCG GCAGGGTCCG AACAGGAGAG CGCACGAGGG AGCTTCCAGG GGGAAACGCC
TGGTATCTTT ATAGTCCTGT CGGGTTTCGC CACCTCTGAC TTGAGCGTCG ATTTTGTGTA TGCTCGTCAG
GGGGGCGGAG CCTATGGAAA AACGCCAGCA ACGCGGCCTT TTTACGGTTC CTGGCCTTTT GCTGGCCTTT
TGCTCACATG TTCTTCCCTG CGTTATCCCC TGATTCTGTG GATAACCGTA TTACCGCCTT TGAGTGAGCT
GATACCGCTC GCCGCAGCCG AACGACCGAG CGCAGCGAGT CAGTGAGCGA GGAAGCGGAA GAGCGCCCAA
TACGCAAACC GCCTCTCCCC GCGCGTTGGC CGATTTCATTA ATGCAGCTGG CACGACAGGT TTCCCAGCTG
GAAAGCGGGC AGTGAGCGCA ACGCAATTAA TGTGAGTTAG CTCACTCATT AGGCACCCCA GGCTTTACAC
TTTATGCTTC CGGCTCGTAT GTTGTGTGGA ATTGTGAGCG GATAACAATT TCACACAGGA AACAGCTATG
ACCATGATTA CGCCAAGCTC CTTCTCTTTC CAGCCCTTCC TCTTCTACTG ACTGACTGAC TGCGTCTCAA
```



[View online »](#)

CCTACCCCAA GCTGTCTCTC CTCGGAGGCC TTTGCTCTAG GGGCTGGTCC CTGTGGGCTG GCATGCCCTT
 TCTGCGAGCT CTTAAAGACA CTGCTCAGGT GTCACCGCCT CTGGAATGCC CACCCTGGGG CTCCCAGCTT
 GAACTGCCTC CTCTCCGCTT CAGTCCTGGT AAAGGCGGGC CTTAACAATC GTTGAGTCCC AGAAGGCTTC
 ACTTCCGGGC TCGTCTGCTT CACCAGCCAG TGAGCTCGGG CGAGCCCGTC CATTCTGGGT CTCACTATCC
 CCACACCTAT CCGTATGTAG AGTGGCGCTA GCTAGGTCAG ACCTCGCCTG AAGACCCTGA CATCTGCCGC
 TGGGCGACTT GGCCCCGCC CTTTGCCTCC CTGCGCGGC ACCGCCAC TCCTCCGTG TCCCCCGAG
 GAAATGGTTC AACCGAAGGG CGGTGCCAAG GTGCCCGGGC CGCTCCGATT GGTCAAGGGC AGCCGTACCA
 CGGCGGTGGC GGGGAGCGC TTCGTGGGCA GCCGCGGGC TCCGAGGCCG TGAGCGCAAA GCCTCAGGCC
 CCGGCTCCCT CCTGAGCTGC GCCGTGCCAG GCCGCCCGCC GGGACTAGCA TGGAGAGCGA CGAGAGCGGC
 CTGCCCGCCA TGGAGATCGA GTGCCGCATC ACCGGCACCC TGAACGGCGT GGAGTTCGAG CTGGTGGGCG
 GCGGAGAGGG CACCCCGAG CAGGGCCGCA TGACCAACAA GATGAAGAGC ACCAAAGGCG CCCTGACCTT
 CAGCCCCTAC CTGCTGAGCC ACGTGATGGG CTACGGCTTC TACCACTTCG GCACCTACCC CAGCGGCTAC
 GAGAACCCCT TCCTGCACGC CATCAACAAC GCGGGCTACA CCAACACCCG CATCGAGAAG TACGAGGACG
 GCGGCGTGCT GCACGTGAGC TTCAGCTACC GCTACGAGGC CGGCCGCGTG ATCGGCGACT TCAAGGTGAT
 GGGCACCGGC TTCCCCGAGG ACAGCGTGAT CTTACCAGAC AAGATCATCC GCAGCAACGC CACCGTGGAG
 CACCTGCACC CCATGGGCGA TAACGATCTG GATGGCAGCT TCACCCGCAC CTTCAGCCTG CGCGACGGCG
 GCTACTACAG CTCCGTGGTG GACAGCCACA TGCACTTCAA GAGCGCCATC CACCCAGCA TCCTGCAGAA
 CGGGGGCCCC ATGTTCCGCT TCCGCCGCGT GGAGGAGGAT CACAGCAACA CCGAGCTGGG CATCGTGGAG
 TACCAGCAGC CTTCAAGAC CCCGGATGCA GATGCCGGTG AAGAAAGAGT TTAAGAATTC CGATCATATT
 CAATAACCCT TAATATAACT TCGTATAATG TATGCTATAC GAAGTTATTA GGTCTGAAGA GGAGTTTACG
 TCCAGCCAAG CTTAGGATCT CGACCTCGAA ATTCTACCGG GTAGGGGAGG CGTTTTTCCC AAGGCAGTCT
 GGAGCATCGC CTTTAGCAGC CCCGTGGGC ACTTGGCGCT ACACAAGTGG CCTCTGGCCT CGCACACATT
 CCACATCCAC CGGTAGGCGC CAACCGACTC CGTTCTTTGG TGGCCCTTC GGCACACTT CTACTCTCC
 CCTAGTCAGG AAGTTCGCC CCGCCCCGCA GCTCGCGTCG TGCAGGACGT GACAAAATGGA AGTAGCACGT
 CTAAGTAGTC TCGTGCAGAT GGACAGCACC GCTGAGCAAT GGAAGCGGGT AGGCCTTTGG GGCAGCGGCC
 AATAGCAGCT TTGCTCCTTC GCTTTCTGGG CTCAGAGGCT GGAAGGGGT GGGTCCGGGG GCGGGCTCAG
 GGGCGGGCTC AGGGGCGGGG CGGGCGCCG AAGGTCTCC GGAGGCCCGG CATTCTGCAC GCTTCAAAAG
 CGCACGTCTG CCGCGCTGTT CTCCTCTTCC TCATCTCCGG GCCTTTTCGAC CTGCATCCAT CTAGATCTCG
 AGCAGCTGAA GCTTACCATG ACCGAGTACA AGCCACGGT GCGCCTCGCC ACCCGCAGC ACGTCCCCAG
 GGGCGTACGC ACCCTCGCG CCGCGTTCGC CGACTACCC GCCACGCGCC ACACCGTGA TCCGGACCGC
 CACATCGAGC GGGTCACCGA GCTGCAAGAA CTCTTCTCA CGCGCGTCGG GCTCGACATC GGCAAGGTGT
 GGGTCCGCGA CGACGGCGCC GCGGTGGCGG TCTGACCAC GCCGGAGAGC GTCGAAGCGG GGGCGGTGTT
 CGCCGAGATC GGCCCGCGCA TGGCCGAGTT GAGCGGTTCC CGGCTGGCCG CGCAGCAACA GATGGAAGGC
 CTCTGGCGC CGCACCGGCC CAAGGAGCCC GCGTGGTTCC TGGCCACCGT CGGCGTCTCG CCCGACCACC
 AGGGCAAGGG TCTGGGCAGC GCCGTCGTGC TCCCCGAGT GGAGGCGGCC GAGCGCGCC GGGTCCCCGC
 CTTCTGGAG ACCTCCGCGC CCCACAACCT CCCCTTCTAC GAGCGGCTCG GCTTACCGT CACCGCCGAC
 GTCGAGGTGC CCGAAGGACC GCGCACCTGG TGCATGACCC GCAAGCCCGG TGCCCTGACG CCGCCCCAG
 ACCCGCAGCG CCCGACCGAA AGGAGCGCAC GACCCCATGC ATCGATGATA TCAGATCCCC GGGATCGAGA
 AATTGATGAT CTATTAACA ATAAAGATGT CCACTAAAAT GGAAGTTTTT CCTGTACATC TTTGTTAAGA
 AGGGTGAGAA CAGAGTACCT ACATTTTGAA TGAAGGATT GGAGCTACGG GGGTGGGGT GGGGTGGGAT
 TAGATAAATG CCTGCTCTTT ACTGAAGGCT CTTTACTATT GCTTTATGAT AATGTTTCAT AGTTGGATAT
 CATAATTTAA ACAAGCAAAA CCAAAATTAAG GGCCAGCTCA TTCCTCCAC TCATGATCTA TAGATCTATA
 GATCTCTCGT GGGATCATTG TTTTCTCTT GATTCCCACT TTGTGGTTCT AAGTACTGTG GTTTCCAAAT
 GTGTCAAGTT CATAGCCTGA AGAACGAGAT CAGCAGCTC TGTTCCACAT ACACTTCATT CTCAGTATTG
 TTTTGCCAAG TTCTAATTCC ATCAGAAGCT GGTGAGATC CGGAACCCTT AATATAACTT CGTATAATGT
 ATGCTATACG AAGTTATTAG GTCCTCGAA GAGGTTCACT AGGCGCGCCC AGAGTTCTGT CTTCCAGCGC
 GAAGAGATAG CGCAGTTGGC GCGGCAGTAC GCTGGTGGAG GGGCAGAGGG CAGGGAGGGG AGCGGCCGGC
 CTGGGAGCGG AGCCTAGGGT TCCGAAGGCG CCATCCCGG ACCTAGGACC GGTGCCAGCC CTGACTCCGC
 CGCCCCTCTG CCTCCGCCAG GGCTGGACCA CGAGCTGGCC TTCTCTGTC TGATCGTGGA GCTGCGCGG
 CTGACCCAG GCCACGTGCT GCCCGACGAG GAGCTGCAGT GGGTGTTCGT GAATGCGGGT GGCTGGATGG
 GCGCCATGTG CTTTCTGCAC GCCTCGTGT CCGAGTATGT GCTGCTCTTC GGCACCGCCT TGGGCTCCCG
 CGGCCACTCG GGTCAAGTGT AGCGGCGGGC CAGACTGGGA GGCTGGGGT GTAAAGGGG CCATGCCCTC

CTTTCTGATG TTTGGCTGGG CCATGCAATG GCGCGAATAC CCTGATAGTG TCATGTGCGA TTGTCACTCA
 GGGCGCTACT GGGCTGAGAT CTCGGATACC ATCATCTCTG GCACCTTCCA CCAGTGGAGA GAGGGCACCA
 CCAAAAGTGA GGTCTTCTAA CGAAGAGACG ACTGACTGAC TGACTGGAAA GTCCTCTCCA CTGACTGTAG
 CCTCCAATTC ACTGGCCGTC GTTTTACAAC GTCGTGACTG GGAAAACCCT GGC GTTACCC AACTTAATCG
 CCTTGACGCA CATCCCCCTT TCGCCAGCTG GCGTAATAGC GAAGAGGCC GCACCGATCG CCCTTCCCAA
 CAGTTGCGCA GCCTGAATGG CGAATGGCGC CTGATGCGGT ATTTTCTCCT TACGCATCTG TGCGGTATTT
 CACACCGCAT ACGTCAAAGC AACCATAGTA CGCGCCCTGT AGCGGCGCAT TAAGCGCGC GGGTGTGGTG
 GTTACGCGCA GCGTGACCGC TACACTTGCC AGCGCCCTAG CGCCCGCTCC TTTTCGTTTC TTCCCTTCTC
 TTCTCGCCAC GTTCGCCGGC TTTCCCGTCC AAGCTCTAAA TCGGGGGCTC CCTTTAGGGT TCCGATTTAG
 TGCTTTACGG CACCTCGACC CCAAAAAACT TGATTTGGGT GATGGTTCAC GTAGTGGGCC ATCGCCCTGA
 TAGACGGTTT TTCGCCCTTT GACGTTGGAG TCCACGTTCT TTAATAGTGG ACTCTTGTTT CAAACTGGAA
 CAACACTCAA CCCTATCTCG GGCTATTCTT TTGATTTATA AGGGATTTTG CCGATTTCCG CCTATTGGTT
 AAAAAATGAG CTGATTTAAC AAAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC AATTTTATGG
 TGCACTCTCA GTACAATCTG CTCTGATGCC GCATAGTTAA GCCAGCCCGG ACACCCGCCA ACACCCGCTG
 ACGCGCCCTG ACGGGCTTGT CTGCTCCCGG CATCCGCTTA CAGACAAGCT GTGACCGTCA ACGGGAGCTG
 CATGTGTACAG AGGTTTTTAC CGTCATCACC GAAACGCGCG ACCCGAAAGG GCCTCGTGAT ACGCCTATTT
 TTATAGGTTA ATGTCATGAT AATAATGGTT TCTTAGACGT CAGGTGGCAC TTTTCGGGGA AATGTGCGCG
 GAACCCCTAT TTGTTTATTT TTCTAAATAC ATTCAAATAT GTATCCGCTC ATGAGACAAT AACCCGTGATA
 AATGCTTCAA TAATATTGAA AAAGGAAGAG TATGAGTATT CAACATTTCC GTGTCGCCCT TATTCCCTTT
 TTTGCGGCAT TTTGCCTTCC TGTTTTTGT CACCCAGAAA CGCTGGTGAA AGTAAAAGAT GCTGAAGATC
 AGTTGGGTGC ACGAGTGGGT TACATCGAAC TGGATCTCAA CAGCGGTAAG ATCCTTGAGA GTTTTCGCCC
 CGAAGAACGT TTTCCAATGA TGAGCACTTT TAAAGTTCTG CTATGTGGCG CGGTATTATC CCGTATTGAC
 GCCGGGCAAG AGCAACTCGG TCGCCGCATA CACTATTCTC AGAATGACTT GGTGAGTAC TCACCAAGTCA
 CAGAAAAGCA TCTTACGGAT GGCATGACAG TAAGAGAATT ATGCAAGTGT GCCATAACCA TGAGTGATAA
 CACTGCGGCC AACTTACTTC TGACAACGAT CGGAGGACCG AAGGAGCTAA CCGCTTTTTT GCACAACATG
 GGGGATCATG TAACTCGCCT T

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_001282205](#), [NM_001282206](#), [NM_001282207](#), [NM_001282208](#), [NM_001282209](#), [NM_005866](#), [NM_147157](#), [NM_147158](#), [NM_147159](#), [NM_147160](#), [NR_104108](#)

UniProt ID:

[Q99720](#)

Synonyms:

ALS16; DSMA2; hSigmaR1; OPRS1; SIG-1R; sigma1R; SR-BP; SR-BP1; SRBP

Summary:

This gene encodes a receptor protein that interacts with a variety of psychotomimetic drugs, including cocaine and amphetamines. The receptor is believed to play an important role in the cellular functions of various tissues associated with the endocrine, immune, and nervous systems. As indicated by its previous name, opioid receptor sigma 1 (OPRS1), the product of this gene was erroneously thought to function as an opioid receptor; it is now thought to be a non-opioid receptor. Mutations in this gene has been associated with juvenile amyotrophic lateral sclerosis 16. Alternative splicing of this gene results in transcript variants encoding distinct isoforms. [provided by RefSeq, Aug 2013]

Product images:

