

Product datasheet for **KN213277**

Estrogen Receptor 1 (ESR1) 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:	Estrogen Receptor 1
Locus ID:	2099
Components:	<p>KN213277G1, Estrogen Receptor 1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TCTTGAGCTGCGGACGGTTC</p> <p>KN213277G2, Estrogen Receptor 1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CCCTACTGCATCAGATCCAA</p> <p>KN213277D, 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**

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AGAAGTAAGT TGGCCGAGT GTTATCACTC ATGGTTATGG CAGCACTGCA TAATTCTCTT ACTGTCATGC
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 GTTTGCGCAA CGTTGTTGCC ATTGCTACAG GCATCGTGGT GTCACGCTCG TCGTTTGTA TGGCTTCATT
 CAGCTCCGGT TCCCAACGAT C

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_000125](#), [NM_001122740](#), [NM_001122741](#), [NM_001122742](#), [NM_001291230](#),
[NM_001291241](#), [NM_001328100](#)

UniProt ID:

[P03372](#)

Synonyms:

ER; Era; ESR; ESRA; ESTRR; NR3A1

Summary:

This gene encodes an estrogen receptor and ligand-activated transcription factor. The canonical protein contains an N-terminal ligand-independent transactivation domain, a central DNA binding domain, a hinge domain, and a C-terminal ligand-dependent transactivation domain. The protein localizes to the nucleus where it may form either a homodimer or a heterodimer with estrogen receptor 2. The protein encoded by this gene regulates the transcription of many estrogen-inducible genes that play a role in growth, metabolism, sexual development, gestation, and other reproductive functions and is expressed in many non-reproductive tissues. The receptor encoded by this gene plays a key role in breast cancer, endometrial cancer, and osteoporosis. This gene is reported to have dozens of transcript variants due to the use of alternate promoters and alternative splicing, however, the full-length nature of many of these variants remain uncertain. [provided by RefSeq, Jul 2020]

Product images:
