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Product datasheet for KN200725

Superoxide Dismutase 1 (SOD1) 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: Superoxide Dismutase 1

Locus ID: 6647

Components: **KN200725G1**, Superoxide Dismutase 1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: AAGGCCGTGTGCGTGCTGAA
KN200725G2, Superoxide Dismutase 1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CAATTTCGAGCAGAAGGCAA
KN200725D, 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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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.

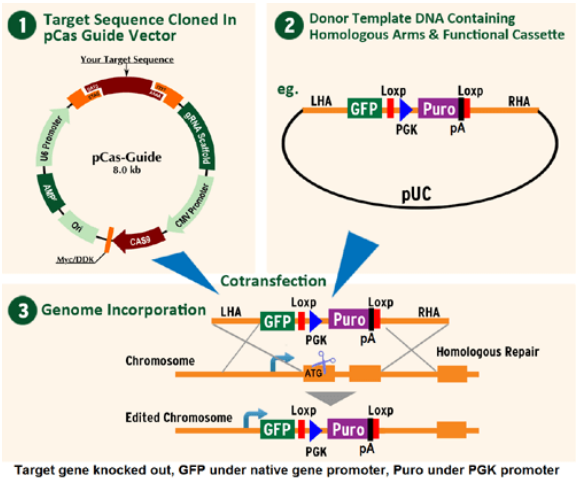
RefSeq: NM_000454

UniProt ID: P00441

Synonyms: ALS; ALS1; HEL-S-44; homodimer; hSod1; IPOA; SOD

Summary: The protein encoded by this gene binds copper and zinc ions and is one of two isozymes responsible for destroying free superoxide radicals in the body. The encoded isozyme is a soluble cytoplasmic protein, acting as a homodimer to convert naturally-occuring but harmful superoxide radicals to molecular oxygen and hydrogen peroxide. The other isozyme is a mitochondrial protein. In addition, this protein contains an antimicrobial peptide that displays antibacterial, antifungal, and anti-MRSA activity against E. coli, E. faecalis, S. aureus, S. aureus MRSA LPV+, S. agalactiae, and yeast C. krusei. Mutations in this gene have been implicated as causes of familial amyotrophic lateral sclerosis. Rare transcript variants have been reported for this gene. [provided by RefSeq, Jul 2020]

Product images:



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