

Product datasheet for **KN317488RB**

Tgfr2 Mouse Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 RFP-BSD donor, 1 scramble control
Donor DNA:	RFP-BSD
Symbol:	Tgfr2
Locus ID:	21813
Components:	<p>KN317488G1, Tgfr2 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)</p> <p>KN317488G2, Tgfr2 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)</p> <p>KN317488RBD, donor DNA containing left and right homologous arms and RFP-BSD functional cassette.</p> <p>GE100003, scramble sequence in pCas-Guide vector</p>
RefSeq:	<u>NM_009371</u> , <u>NM_029575</u>
UniProt ID:	<u>Q62312</u>
Synonyms:	1110020H15Rik; AU042018; DNIIR; RIIDN; TbetaR-II; TbetaRII; TBR-II
Summary:	<p>Transmembrane serine/threonine kinase forming with the TGF-beta type I serine/threonine kinase receptor, TGFBR1, the non-promiscuous receptor for the TGF-beta cytokines TGFB1, TGFB2 and TGFB3. Transduces the TGFB1, TGFB2 and TGFB3 signal from the cell surface to the cytoplasm and is thus regulating a plethora of physiological and pathological processes including cell cycle arrest in epithelial and hematopoietic cells, control of mesenchymal cell proliferation and differentiation, wound healing, extracellular matrix production, immunosuppression and carcinogenesis. The formation of the receptor complex composed of 2 TGFBR1 and 2 TGFBR2 molecules symmetrically bound to the cytokine dimer results in the phosphorylation and the activation of TGFBR1 by the constitutively active TGFBR2. Activated TGFBR1 phosphorylates SMAD2 which dissociates from the receptor and interacts with SMAD4. The SMAD2-SMAD4 complex is subsequently translocated to the nucleus where it modulates the transcription of the TGF-beta-regulated genes. This constitutes the canonical SMAD-dependent TGF-beta signaling cascade. Also involved in non-canonical, SMAD-independent TGF-beta signaling pathways (By similarity).[UniProtKB/Swiss-Prot Function]</p>



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Product images:

