

Product datasheet for **KN312990BN**

Pdcd1 Mouse Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 mBFP-Neo donor, 1 scramble control
Donor DNA:	mBFP-Neo
Symbol:	Pdcd1
Locus ID:	18566
Components:	KN312990G1 , Pdcd1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002) KN312990G2 , Pdcd1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) KN312990BND , donor DNA containing left and right homologous arms and mBFP-Neo functional cassette. GE100003 , scramble sequence in pCas-Guide vector
RefSeq:	<u>NM_008798</u>
UniProt ID:	<u>Q02242</u>
Synonyms:	Ly101; PD-1; Pdc1
Summary:	Inhibitory receptor on antigen activated T-cells that plays a critical role in induction and maintenance of immune tolerance to self (PubMed:10485649, PubMed:11698646, PubMed:11209085, PubMed:21300912). Delivers inhibitory signals upon binding to ligands, such as CD274/PDCD1L1 and CD273/PDCD1LG2 (PubMed:11015443, PubMed:11224527, PubMed:22641383, PubMed:18287011, PubMed:18641123). Following T-cell receptor (TCR) engagement, PDCD1 associates with CD3-TCR in the immunological synapse and directly inhibits T-cell activation (PubMed:22641383). Suppresses T-cell activation through the recruitment of PTPN11/SHP-2: following ligand-binding, PDCD1 is phosphorylated within the ITSM motif, leading to the recruitment of the protein tyrosine phosphatase PTPN11/SHP-2 that mediates dephosphorylation of key TCR proximal signaling molecules, such as ZAP70, PRKCQ/PKCtheta and CD247/CD3zeta (PubMed:11698646, PubMed:22641383). The PDCD1-mediated inhibitory pathway is exploited by tumors to attenuate anti-tumor immunity and facilitate tumor survival (By similarity).[UniProtKB/Swiss-Prot Function]



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Product images:

