

# **Product datasheet for KN216590LP**

## OriGene Technologies, Inc.

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## CD45 (PTPRC) Human Gene Knockout Kit (CRISPR)

#### **Product data:**

**Product Type:** Knockout Kits (CRISPR)

**Format:** 2 gRNA vectors, 1 Luciferase-Puro donor, 1 scramble control

**Donor DNA:** Luciferase-Puro

Symbol: CD45 Locus ID: 5788

**Components: KN216590G1**, CD45 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

KN216590G2, CD45 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)

KN216590LPD, donor DNA containing left and right homologous arms and Luciferase-Puro

functional cassette.

**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 001267798, NM 002838, NM 080921, NM 080922, NM 080923, NR 052021

UniProt ID: P08575

**Synonyms:** B220; CD45; CD45R; GP180; L-CA; LCA; LY5; T200

**Summary:** The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP)

family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitosis, and oncogenic transformation. This PTP

contains an extracellular domain, a single transmembrane segment and two tandem

intracytoplasmic catalytic domains, and thus is classified as a receptor type PTP. This PTP has

been shown to be an essential regulator of T- and B-cell antigen receptor signaling. It functions through either direct interaction with components of the antigen receptor complexes, or by activating various Src family kinases required for the antigen receptor signaling. This PTP also suppresses JAK kinases, and thus functions as a regulator of cytokine

receptor signaling. Alternatively spliced transcripts variants of this gene, which encode

distinct isoforms, have been reported. [provided by RefSeq, Jun 2012]





# **Product images:**

## Donor Vector Edited Chromosome



RFP, Luc, and mBFP will be under native gene promoter