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Product datasheet for TL515034

Ccr6 Mouse shRNA Plasmid (Locus ID 12458)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Ccr6 Mouse shRNA Plasmid (Locus ID 12458)
Locus ID:	12458
Synonyms:	CC-CKR-6; CCR-6; Cmkbr6; KY411
Vector:	pGFP-C-shLenti (TR30023)
E. coli Selection:	Chloramphenicol (34 ug/ml)
Mammalian Cell Selection:	Puromycin
Format:	Lentiviral plasmids
Components:	Ccr6 - Mouse, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 12458). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free.
RefSeq:	BC100756, BC100757, BC100758, BC105669, NM_001190333, NM_001190334, NM_001190335, NM_001190336, NM_001190337, NM_001190338, NM_009835, NM_009835.1, NM_009835.2, NM_009835.3, NM_009835.4, NM_001190333.1, NM_001190334.1, NM_001190335.1, NM_001190336.1, NM_001190337.1, NM_001190338.1
UniProt ID:	O54689

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Summary:

Receptor for the C-C type chemokine CCL20. Binds to CCL20 and subsequently transduces a signal by increasing the intracellular calcium ion levels (PubMed:20068036). Although CCL20 is its major ligand it can also act as a receptor for non-chemokine ligands such as beta-defensins (PubMed:25122636). Binds to defensin DEFB1 leading to increase in intracellular calcium ions and cAMP levels. Its binding to DEFB1 is essential for the function of DEFB1 in regulating sperm motility and bactericidal activity (By similarity). Binds to defensins DEFB4 and DEFB4A/B and mediates their chemotactic effects (PubMed:20068036). The ligand-receptor pair CCL20-CCR6 is responsible for the chemotaxis of dendritic cells (DC), effector/memory T-cells and B-cells and plays an important role at skin and mucosal surfaces under homeostatic and inflammatory conditions, as well as in pathology, including cancer and various autoimmune diseases. CCR6-mediated signals are essential for immune responses to microbes in the intestinal mucosa and in the modulation of inflammatory responses initiated by tissue insult and trauma (PubMed:21376174). CCR6 is essential for the recruitment of both the proinflammatory IL17 producing helper T-cells (Th17) and the regulatory T-cells (Treg) to sites of inflammation (PubMed:19050256). Required for the normal migration of Th17 cells in Peyers patches and other related tissue sites of the intestine and plays a role in regulating effector T-cell balance and distribution in inflamed intestine (PubMed:19129757). Plays an important role in the coordination of early thymocyte precursor migration events important for normal subsequent thymocyte precursor development, but is not required for the formation of normal thymic natural regulatory T-cells (nTregs). Required for optimal differentiation of DN2 and DN3 thymocyte precursors (PubMed:24638065). Essential for B-cell localization in the subepithelial dome of Peyers-patches and for efficient B-cell isotype switching to IgA in the Peyers-patches (PubMed:27174992). Essential for appropriate anatomical distribution of memory B-cells in the spleen and for the secondary recall response of memory B-cells (PubMed:25505290). Positively regulates sperm motility and chemotaxis via its binding to CCL20 (PubMed:23765988).[UniProtKB/Swiss-Prot Function]

shRNA Design:

These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our custom shRNA service.

Performance Guaranteed:

OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.

For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at techsupport@origene.com. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).