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Product datasheet for TR517068

Tyrobp Mouse shRNA Plasmid (Locus ID 22177)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Tyrobp Mouse shRNA Plasmid (Locus ID 22177)
Locus ID:	22177
Synonyms:	DAP12; KARAP; Ly83
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	Tyrobp - Mouse, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 22177). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	BC056450, NM_011662, NM_011662.1, NM_011662.2, NM_011662.3
UniProt ID:	O54885

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Summary:

Adapter protein which non-covalently associates with activating receptors found on the surface of a variety of immune cells to mediate signaling and cell activation following ligand binding by the receptors (PubMed:15471863, PubMed:9647200). TYROBP is tyrosine-phosphorylated in the ITAM domain following ligand binding by the associated receptors which leads to activation of additional tyrosine kinases and subsequent cell activation (PubMed:15728241). Also has an inhibitory role in some cells (PubMed:21727189). Non-covalently associates with activating receptors of the CD300 family to mediate cell activation (By similarity). Also mediates cell activation through association with activating receptors of the CD200R family (PubMed:15471863). Required for neutrophil activation mediated by integrin (PubMed:17086186). Required for the activation of myeloid cells mediated by the CLEC5A/MDL1 receptor (By similarity). Associates with natural killer (NK) cell receptors such as the KLRD1/KLRC2 heterodimer to mediate NK cell activation (By similarity). Also associates non-covalently with the NK cell receptors KLRA4/LY49D and KLRA8/LY49H which leads to NK cell activation (PubMed:9647200). Associates with TREM1 to mediate activation of neutrophils and monocytes (By similarity). Associates with TREM2 on monocyte-derived dendritic cells to mediate up-regulation of chemokine receptor CCR7 and dendritic cell maturation and survival (By similarity). Association with TREM2 mediates cytokine-induced formation of multinucleated giant cells which are formed by the fusion of macrophages (PubMed:18957693). Stabilizes the TREM2 C-terminal fragment (TREM2-CTF) which is produced by TREM2 ectodomain shedding (By similarity). In microglia, required with TREM2 for phagocytosis of apoptotic neurons (PubMed:15728241). Required with ITGAM/CD11B in microglia to control production of microglial superoxide ions which promote the neuronal apoptosis that occurs during brain development (PubMed:18685038). Promotes proinflammatory responses in microglia following nerve injury which accelerates degeneration of injured neurons (PubMed:25690660). Positively regulates the expression of the IRAK3/IRAK-M kinase and IL10 production by liver dendritic cells and inhibits their T cell allostimulatory ability (PubMed:21257958). Negatively regulates B cell proliferation (PubMed:21727189). Required for CSF1-mediated osteoclast cytoskeletal organization (PubMed:18691974). Positively regulates multinucleation during osteoclast development (PubMed:12569157, PubMed:14969392).[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).