

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_133655.1](#)

RefSeq Size: 1534 bp

RefSeq ORF: 711 bp

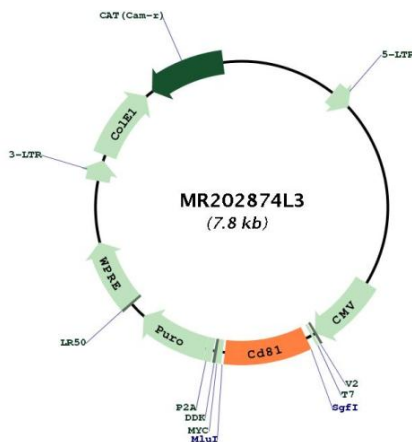
Locus ID: 12520

UniProt ID: [P35762](#)

Cytogenetics: 7 88.1 cM

Gene Summary:

Structural component of specialized membrane microdomains known as tetraspanin-enriched microdomains (TERMs), which act as platforms for receptor clustering and signaling. Essential for trafficking and compartmentalization of CD19 receptor on the cell surface of activated B cells (PubMed:23499492). Upon initial encounter with a microbial pathogen, enables the assembly of CD19-CR2 and B cell receptor complexes at signaling TERMS, lowering the threshold dose of antigen required to trigger B cell clonal expansion and humoral immune response (By similarity). In T cells, associates with CD4 or CD8 coreceptors and defines the maturation state of antigen-induced synapses with B cells (By similarity). Facilitates localization of CD3 in these immune synapses, required for costimulation and sustained activation of T cells, preferentially triggering T helper type 2 immune response (PubMed:11046035). Can act both as positive and negative regulator of homotypic or heterotypic cell-cell fusion processes. In myoblasts, associates with another tetraspanin CD9 in complex with PTGFRN and inhibits myotube fusion during muscle regeneration (PubMed:23575678). In macrophages, associates with CD9 and beta-1 and beta-2 integrins, and prevents macrophage fusion into multinucleated giant cells specialized in ingesting complement-opsonized large particles. Also prevents the fusion between mononuclear cell progenitors into osteoclasts in charge of bone resorption. Positively regulates sperm-egg fusion and may be involved in the acrosome reaction (PubMed:16380109, PubMed:17290409). Regulates protein trafficking in intracellular compartments. In T cells, associates with dNTPase SAMHD1 and defines its subcellular location, enabling its degradation by the proteasome and thereby controlling intracellular dNTP levels (By similarity). Also regulates integrin-dependent migration of macrophages, particularly relevant for inflammatory response in the lung (PubMed:18662991).[UniProtKB/Swiss-Prot Function]

Product images:


Circular map for MR202874L3