

## Product datasheet for **RC223343**

### SLAMF1 (NM\_003037) Human Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | SLAMF1 (NM_003037) Human Tagged ORF Clone                                   |
| Tag:                      | Myc-DDK   |
| Symbol:                   | SLAMF1  |
| Synonyms:                 | CD150; CDw150; SLAM   |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| ORF Nucleotide Sequence:  | >RC223343 representing NM_003037<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTGTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGATCCCAAGGGGCTCCTCTCCTTGACCTTCGTGCTGTTTCTCTCCCTGGCTTTGGGGCAAGCTACG  
GAACAGGTGGGCGCATGATGAAGTCCCAAGATTCTCCGGCAGTTGGGAAGCAAAGTGTGCTGCCCT  
GACATATGAAAGGATAAATAAGAGCATGAACAAAGCATCCACATTGTCGTCACAATGGCAAATCACTG  
GAGAACAGTGTGAGAACAAAATAGTGTCTTTGATCCATCCGAAGCAGGCCCTCCACGTTATCTAGGAG  
ATCGCTACAAGTTTATCTGGAGAATCTCACCTGGGGATACGGGAAAGCAGGAAGGAGGATGAGGGATG  
GTACCTTATGACCTGGAGAAAAATGTTTCAGTTCAGCGCTTTTGCCTGCAGTTGAGGCTTTATGAGCAG  
GTCTCCACTCCAGAAATTAAGTTTAAACAAGACCCAGGAGAACGGGACCTGCACCTTGATACTGGGCT  
GCACAGTGGAGAAGGGGGACCATGTGGCTTACAGCTGGAGTGAAGGCGGGCACCCACCCACTGAACCC  
AGCCAACAGCTCCACCTCCTGTCCCTCACCTCGGCCCCAGCATGCTGACAATATCTACATCTGCACC  
GTGAGCAACCCTATCAGCAACAATCCAGACCTTCAGCCCGTGGCCCGGATGCAGGACAGACCCCTCAG  
AAACAAACCATGGGCAGTGTATGCTGGGCTGTTAGGGGTGTCATCATGATTCTCATGTTGGTGAAT  
ACTACAGTTGAGAAGAAGAGGTAAACGAACCATACCAGACAACAGTGGAAAAAAGCCTTACGATC  
TATGCCCAAGTCCAGAAACAGGTCCTTTCAGAAGAACTTGACTCCTTCCAGCTCAGGACCCCTTGA  
CCACCATATATGTTGCTGCCACAGAGCCTGTCCAGAGTCTGTCCAGGAACAAATCCATCACAGTCTA  
TGCTAGTGTGACACTTCCAGAGAGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC223343 representing NM\_003037  
 Red=Cloning site Green=Tags(s)

MDPKGLLSLTFVLFLSLAFGASYGTGGRMMNCPKILRQLGSKVLLPLTYERINKSMNKSIHIVVTMAKSL  
 ENSVENKIVSLDPSEAGPPRYLGDRYKFYLENLTLGIRESRKEDEGWYMTLEKNVSVQRFCLQLRLYEQ  
 VSTPEIKVNLNKTQENGCTILGCTVEKGDHVAYSWEKAGTHPLNPANSSHLLSLTLGPQHADNIYICT  
 VSNPISNNSQTFSPWPGCRTDPSEKTPWAVYAGLLGGVIMILIMVVILQLRRRGKTNHYQTTVEKKSLTI  
 YAQVQKPGPLQKKLDSFPAQDPCTTIYVAATEPVPEVQETNSITVYASVTLPE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6106\\_h03.zip](https://cdn.origene.com/chromatograms/mk6106_h03.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_003037

**ORF Size:** 1005 bp

**OTI Disclaimer:** 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.

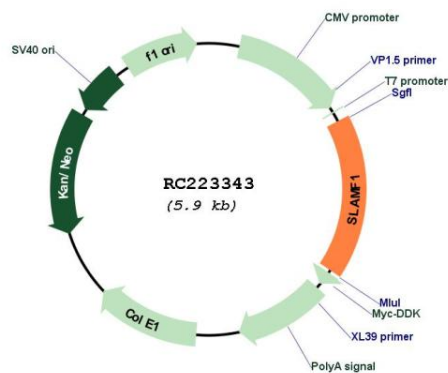
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

|                               |   |
|-------------------------------|---|
| <b>Reconstitution Method:</b> | <ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol> |
| <b>Note:</b>                  | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.  |
| <b>RefSeq:</b>                | <u><a href="#">NM_003037.4</a></u>  |
| <b>RefSeq Size:</b>           | 1789 bp   |
| <b>RefSeq ORF:</b>            | 1008 bp   |
| <b>Locus ID:</b>              | 6504  |
| <b>UniProt ID:</b>            | <u><a href="#">Q13291</a></u>   |
| <b>Cytogenetics:</b>          | 1q23.3  |
| <b>Protein Families:</b>      | Druggable Genome, ES Cell Differentiation/IPS, Transmembrane  |
| <b>MW:</b>                    | 37.1 kDa  |

**Gene Summary:**

Self-ligand receptor of the signaling lymphocytic activation molecule (SLAM) family. SLAM receptors triggered by homo- or heterotypic cell-cell interactions are modulating the activation and differentiation of a wide variety of immune cells and thus are involved in the regulation and interconnection of both innate and adaptive immune response. Activities are controlled by presence or absence of small cytoplasmic adapter proteins, SH2D1A/SAP and/or SH2D1B/EAT-2. SLAMF1-induced signal-transduction events in T-lymphocytes are different from those in B-cells. Two modes of SLAMF1 signaling seem to exist: one depending on SH2D1A (and perhaps SH2D1B) and another in which protein-tyrosine phosphatase 2C (PTPN11)-dependent signal transduction operates. Initially it has been proposed that association with SH2D1A prevents binding to inhibitory effectors including INPP5D/SHIP1 and PTPN11/SHP-2 (PubMed:11806999). However, signaling is also regulated by SH2D1A which can simultaneously interact with and recruit FYN which subsequently phosphorylates and activates SLAMF1 (PubMed:12458214). Mediates IL-2-independent proliferation of activated T-cells during immune responses and induces IFN-gamma production (By similarity). Downstreaming signaling involves INPP5D, DOK1 and DOK2 leading to inhibited IFN-gamma production in T-cells, and PRKCQ, BCL10 and NFKB1 leading to increased T-cell activation and Th2 cytokine production (By similarity). Promotes T-cell receptor-induced IL-4 secretion by CD4(+) cells (By similarity). Inhibits antigen receptor-mediated production of IFN-gamma, but not IL-2, in CD4(-)/CD8(-) T-cells (By similarity). Required for IL-4 production by germinal centers T follicular helper (T(Fh))cells (By similarity). May inhibit CD40-induced signal transduction in monocyte-derived dendritic cells (PubMed:16317102). May play a role in allergic responses and may regulate allergen-induced Th2 cytokine and Th1 cytokine secretion (By similarity). In conjunction with SLAMF6 controls the transition between positive selection and the subsequent expansion and differentiation of the thymocytic natural killer T (NKT) cell lineage. Involved in the peripheral differentiation of indifferent natural killer T (iNKT) cells toward a regulatory NKT2 type (By similarity). In macrophages involved in down-regulation of IL-12, TNF-alpha and nitric oxide in response to lipopolysaccharide (LPS) (By similarity). In B-cells activates the ERK signaling pathway independently of SH2D1A but implicating both, SYK and INPP5D, and activates Akt signaling dependent on SYK and SH2D1A (By similarity). In B-cells also activates p38 MAPK and JNK1 and JNK2 (PubMed:20231852). In conjunction with CD84/SLAMF5 and SLAMF6 may be a negative regulator of the humoral immune response (By similarity). Involved in innate immune response against Gram-negative bacteria in macrophages; probably recognizes OmpC and/or OmpF on the bacterial surface, regulates phagosome maturation and recruitment of the PI3K complex II (PI3KC3-C2) leading to accumulation of PdtIns(3)P and NOX2 activity in the phagosomes (PubMed:20818396). [UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for RC223343