

## Product datasheet for MR222873

### Cd244 (NM\_018729) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cd244 (NM_018729) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cd244
Synonyms:	2B4; C9.1; F730046O15Rik; Ly90; NAIL; NKR2B4; Nmrk; SLAMF4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR222873 representing NM_018729 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTTGGGGCAAGCTGTCTGTTCACAACCTTTCTGCTCCTCAGGGCTCATCAGGGCCAAGACTGCCAG  
ATTCTTCTGAAGAAGTGGTTGGTGTCTCAGGAAAGCCTGTCCAGCTGAGGCCTTCCAACATACAGACAAA  
AGATGTTTCTGTTCAATGGAAGAAGACAGAACAGGGCTCACACAGAAAAATTGAGATCCTGAATTGGTAT  
AATGATGGTCCCAGTTGGTCAAATGTATCTTTTAGTGATATCTATGGTTTTGATTATGGGGATTTGCTC  
TTAGTATCAAGTCAGCTAAGCTGCAAGACAGTGGTCACTACCTGTGGAGATACCAACACAGGGCGAAA  
AGTGTGCAATAAGAACTTCCAGCTTCTTATACTTGATCATGTTGAGACCCCTAACCTGAAGGCCAGTGG  
AAGCCCTGGACTAATGGGACTTGTCAACTGTTTTTGTCTGCTTGGTGACCAAGGATGACATGTGAGCT  
ACGCTTTGTACAGAGGGAGCACTCTGATCTCCAATCAAAGGAATAGTACCACTGGGAGAACCAGATTGA  
CGCCAGCAGCCTGCACACATACACCTGCAACGTTAGCAACAGAGCCAGCTGGGCAAACCACCCCTGAAC  
TTCACCCATGGCTGTCAAAGTGTCCCTTCGAATTCAGATTTCTGCCCTTGGGGTGATCATCGTGATTC  
TAGTTACATTATTTCTCGGGCCATCATTTGTTTCTGTGTGGACTAAGAAGAGGAAGCAGTTACAGTT  
CAGCCCTAAGGAACCTTTGACAATATATGAATATGTCAAGGACTCACGAGCCAGCAGGGATCAACAAGGA  
TGCTCTAGGGCCTCTGGATCTCCCTCGGCTGTCCAGGAAGATGGGAGGGGACAAAGAGAATTGGACAGG  
GTGTTTCTGAGGTGCTGGAGCAGTTGCCACAGCAGACTTTCCTGGAGATAGAGGCACCATGTACTCTAT  
GATACAGTGCAAGCCTTCTGATTCCACATCACAAGAAAAATGTACAGTATATTAGTAGTCCAGCCTTCC  
AGGAAGTCTGGATCCAAGAAGAGGAACCAGAACTTTCCTTAAGTTGTACCGTGTACGAGGAGTTGGAA  
ACCCATGGCTCAAAGCTCACAACCTGCCAGGCTGAGCCGAGAGAGCTGGAGAAGCTTTGATGTCTACTC  
C

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR222873 representing NM\_018729  
Red=Cloning site Green=Tags(s)

MLGQAVLFTTFLLLRAHQGDPCDSSEEVVGVSGKPVQLRPSNIQTKDVSQWKKTEQGSHRKIEILNWX  
 NDGPSWSNVSFSDIYGFYDGFALSIKSAKLQDSGHYLLLEITNTGGKVCNKNFQLLILDHVETPNLKAQW  
 KPWTNGTCQLFLSCLVTKDDNVSYALYRGSTLISNQRNSTHWENQIDASSLHTYTCNVSNRASWANHTLN  
 FTHGCSVPSNFRFLPFVGVIIIVLTVLFLGAIICFCVWTKRKRQLQFSPKEPLTIYEVKDSRASRDQQG  
 CSRASGSPSAVQEDGRGQRELDRRVSEVLEQLPQQTFPGDRGTMYSMIQCKPDSSTSQEKCTVYVVVQPS  
 RKSGSKRNQSSLSCTVYEEVGNPWLKAHNPARLSRRELENFDVYS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9018\\_f05.zip](https://cdn.origene.com/chromatograms/mm9018_f05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_018729

**ORF Size:** 1191 bp

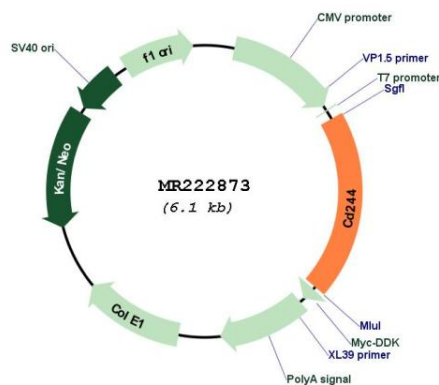
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto: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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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>RefSeq:</b>	<a href="#">NM_018729.2</a> , <a href="#">NP_061199.2</a>
<b>RefSeq Size:</b>	3758 bp
<b>RefSeq ORF:</b>	1194 bp
<b>Locus ID:</b>	18106
<b>UniProt ID:</b>	<a href="#">Q07763</a>
<b>Cytogenetics:</b>	1 79.52 cM
<b>MW:</b>	45.3 kDa

**Gene Summary:**

Heterophilic receptor of the signaling lymphocytic activation molecule (SLAM) family; its ligand is CD48. 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. Acts as activating natural killer (NK) cell receptor (PubMed:8326140, PubMed:12734329, PubMed:19648922, PubMed:20962259). Activating function implicates association with SH2D1A and FYN. Downstreaming signaling involves predominantly VAV1, and, to a lesser degree, INPP5D/SHIP1 and CBL. Signal attenuation in the absence of SH2D1A is proposed to be dependent on INPP5D and to a lesser extent PTPN6/SHP-1 and PTPN11/SHP-2. Stimulates NK cell cytotoxicity, production of IFN-gamma and granule exocytosis (PubMed:8326140, PubMed:15169881, PubMed:15998796, PubMed:22683124). Optimal expansion and activation of NK cells seems to be dependent on the engagement of CD244 with CD48 expressed on neighboring NK cells (PubMed:15905190). Regulation of NK cell activity by adapters Sh2d1b and Sh2d1b2 is reported conflictingly (PubMed:16127454, PubMed:16425036). Acts as costimulator in NK activation by enhancing signals by other NK receptors such as NCR3 and NCR1. At early stages of NK cell differentiation may function as an inhibitory receptor possibly ensuring the self-tolerance of developing NK cells (By similarity). Involved in the regulation of CD8(+) T-cell proliferation; expression on activated T-cells and binding to CD488 provides costimulatory-like function for neighboring T-cells (PubMed:11739483). Inhibits inflammatory responses in dendritic cells (DCs) (PubMed:25643613).[UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for MR222873