

Product datasheet for **RG208050**

NKG2D (KLRK1) (NM_007360) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NKG2D (KLRK1) (NM_007360) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NKG2D
Synonyms:	CD314; D12S2489E; KLR; NKG2-D; NKG2D
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG208050 representing NM_007360 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**

ATGGGGTGGATTCGTGGTCGGAGGTCTCGACACAGCTGGGAGATGAGTGAATTCATAATTATAACTTGGATCTGAAGAAGAGTGATTTTTCAACACGATGGCAAAGCAAAGATGTCCAGTAGTCAAAGCAAATGTAGAGAAAATGCATCTCCATTTTTTCTGCTGCTTCATCGCTGTAGCCATGGGAATCCGTTTCATTATTATGTAGCAATATGGAGTGTGTATTCCTAAACTCATTATTCAACCAAGAAGTCAAATTCCTTGACCGAAAGTTACTGTGGCCATGTCTAAAACTGGATATGTTACAAAAATAACTGCTACCAATTTTTTGATGAGAGTAAAACTGGTATGAGAGCCAGGCTTCTGTATGTCTCAAATGCCAGCCTTCTGAAAGTATACAGCAAGAGGACCAGGATTTACTTAACTGGTGAAGTCATATCATTGGATGGGACTAGTACACATTCACAAATGATCTTGGCAGTGGGAAGATGGCTCCATTCTCACCCAACTACTAACAATAATTGAAATGCAGAAGGGAGACTGTGCACTCTATGCCTCGAGCTTTAAAGGCTATATAGAAAAGTGTCAACTCCAAATACATACATCTGCATGCAAAGGACTGTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG208050 representing NM_007360
 Red=Cloning site Green=Tags(s)

MGWIRGRRSRHSWEMSEFHNYNLDLKKSDFSTRWQKQRCPPVVKSKRENASPPFFCCFIAMGIRFIIM
 VAIWSAVFLNSLFNQEVQIPLTESYCGPCPNWICYKNNCYQFFDESKNWEYSQASCMSQNASLLKVYSK
 EDQDLLKLVKSYHWMGLVHIPTNGSQWEDGSILSPNLLTIIEMQKGDICALYASSFKGYIENCSTPNTYI
 CMQRTV

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_007360

ORF Size: 648 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).

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_007360.1](#), [NP_031386.1](#)

RefSeq Size: 1770 bp

RefSeq ORF: 651 bp

Locus ID: 22914

UniProt ID: [P26718](#)

Cytogenetics: 12p13.2

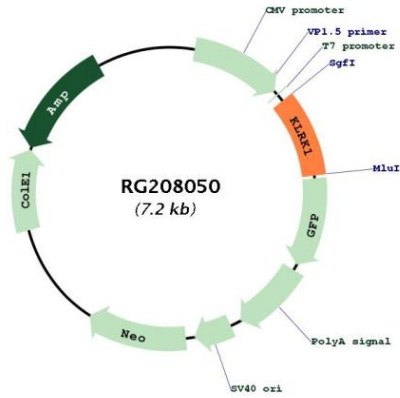
Domains: CLECT

Protein Families: Transmembrane

Protein Pathways: Natural killer cell mediated cytotoxicity

Gene Summary: Natural killer (NK) cells are lymphocytes that can mediate lysis of certain tumor cells and virus-infected cells without previous activation. They can also regulate specific humoral and cell-mediated immunity. NK cells preferentially express several calcium-dependent (C-type) lectins, which have been implicated in the regulation of NK cell function. The NKG2 gene family is located within the NK complex, a region that contains several C-type lectin genes preferentially expressed in NK cells. This gene encodes a member of the NKG2 family. The encoded transmembrane protein is characterized by a type II membrane orientation (has an extracellular C terminus) and the presence of a C-type lectin domain. It binds to a diverse family of ligands that include MHC class I chain-related A and B proteins and UL-16 binding proteins, where ligand-receptor interactions can result in the activation of NK and T cells. The surface expression of these ligands is important for the recognition of stressed cells by the immune system, and thus this protein and its ligands are therapeutic targets for the treatment of immune diseases and cancers. Read-through transcription exists between this gene and the upstream KLRC4 (killer cell lectin-like receptor subfamily C, member 4) family member in the same cluster. [provided by RefSeq, Dec 2010]

Product images:



Circular map for RG208050