

Product datasheet for **RN206032**

Havcr2 (NM_001100762) Rat Untagged Clone

Product data:

Product Type: Expression Plasmids

Product Name: Havcr2 (NM_001100762) Rat Untagged Clone

Tag: Tag Free

Symbol: Havcr2

Synonyms: tim3

Mammalian Cell Selection: Neomycin

Vector: pCMV6-Entry (PS100001)

E. coli Selection: Kanamycin (25 ug/mL)

Fully Sequenced ORF: >RN206032 representing NM_001100762
Red=Cloning site Blue=ORF Orange=Stop codon

TTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTTTTTCATGGCTTCCTTCAGCTGTGCCCTGCTGCTGCTGCAACCACTACCTGCAAGGTCCTTGAAA
ATGCTTACACAGCTGAGGTCGGGAAGAATGCCTATCTGCCCTGCAGCTACACTGTACCTGCCCCTGGGAC
GCTCGTCCTATCTGCTGGGGCAAGGGATCCTGTCCTTTGTTACAGTGTCCAGTGTGGTGCTCAGAACG
GATGAAACGAATGTGACATATCGGAAATCCAGAAGATACCAGCTAAAGGGGAATTTCTACAAAGGAGACA
TGTCGCTGACCATAAAGAATGTGACTCTAGCTGACTCTGGGACCTACTGCTGCAGGATACAATTCCTTGG
CCCAATGAATGATGAAAAATTAGAGCTGAAATTAAGCATCACTGAACCAGCCAAAGTCATCCCAGCTGGG
ACTGCTCATGGGGATTCTACAACAGCTTCTCCAGAACCTAACCCTAGGGGAAGTGGCTCAGAGACAC
AGACCCTGGTGACCCTCCATGATAACAATGGAACAAAAATTTCCACATGGGCCGATGAAATTAAGGACTC
TGGAGAACTATCAGAACTGCTGTCCACATTGGAGTAGGCGTCTCTGCTGGGCTGGCCCTGGCACTTATT
CTTGGTGTTTAATCCTTAAATGGTATTCTCTAAGAAAAAGAAGTTGCAGGATTGAGTCTTATTACAC
TGGCCAACTCCCCACCAGGAGGGTTGGTGAATGCAGGAGCAGGCAGGATTCGGTCTGAGGAAAACATCTA
CACTATAGAGGAGAACATATGAAATGGAGAATTCAAATGAGTACTACTGCTATGTCAGCAGCCAGCAG
CCATCCTGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001100762

Insert Size: 849 bp



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|-------------------------------|---|
| OTI Disclaimer: | Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP). |
| 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: | <ol style="list-style-type: none">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: | <u>NM_001100762.1</u> , <u>NP_001094232.1</u> |
| RefSeq Size: | 2763 bp |
| RefSeq ORF: | 849 bp |
| Locus ID: | 363578 |
| UniProt ID: | <u>P0C0K5</u> |
| Cytogenetics: | 10q21 |

Gene Summary:

Cell surface receptor implicated in modulating innate and adaptive immune responses. Generally accepted to have an inhibiting function. Reports on stimulating functions suggest that the activity may be influenced by the cellular context and/or the respective ligand. Regulates macrophage activation. Inhibits T-helper type 1 lymphocyte (Th1)-mediated auto- and alloimmune responses and promotes immunological tolerance. In CD8+ cells attenuates TCR-induced signaling, specifically by blocking NF-kappaB and NFAT promoter activities resulting in the loss of IL-2 secretion. The function may implicate its association with LCK proposed to impair phosphorylation of TCR subunits. In contrast, shown to activate TCR-induced signaling in T-cells probably implicating ZAP70, LCP2, LCK and FYN. Expressed on Treg cells can inhibit Th17 cell responses. Receptor for LGALS9. Binding to LGALS9 is believed to result in suppression of T-cell responses; the resulting apoptosis of antigen-specific cells may implicate HAVCR2 phosphorylation and disruption of its association with BAG6. Binding to LGALS9 is proposed to be involved in innate immune response to intracellular pathogens. Expressed on Th1 cells interacts with LGALS9 expressed on Mycobacterium tuberculosis-infected macrophages to stimulate antibactericidal activity including IL-1 beta secretion and to restrict intracellular bacterial growth. However, the function as receptor for LGALS9 has been challenged (By similarity). Also reported to enhance CD8+ T cell responses to an acute infection such as by *Listeria monocytogenes*. Receptor for phosphatidylserine (PtSer); PtSer-binding is calcium-dependent. May recognize PtSer on apoptotic cells leading to their phagocytosis. Mediates the engulfment of apoptotic cells by dendritic cells. Expressed on T-cells, promotes conjugation but not engulfment of apoptotic cells. Expressed on dendritic cells (DCs) positively regulates innate immune response and in synergy with Toll-like receptors promotes secretion of TNF-alpha. In tumor-infiltrating DCs suppresses nucleic acid-mediated innate immune response by interaction with HMGB1 and interfering with nucleic acid-sensing and trafficking of nucleic acids to endosomes. Can enhance mast cell production of Th2 cytokines IL-4, IL-6 and IL-13. Expressed on natural killer (NK) cells acts as a coreceptor to enhance IFN-gamma production in response to LGALS9. In contrast, shown to suppress NK cell-mediated cytotoxicity. Negatively regulates NK cell function in LPS-induced endotoxic shock.[UniProtKB/Swiss-Prot Function]