

## Product datasheet for **MG201872**

### Pycard (NM\_023258) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Pycard (NM\_023258) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Pycard  
**Synonyms:** 9130417A21Rik; Asc; CARD5; masc; TMS-1; TNS1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG201872 representing NM\_023258  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGATCGCC

ATGGGGCGGGCAGAGATGCCATCCTGGACGCTCTTGAAAATTGTGAGGGGATGAACTCAAAAAGTTCA  
AGATGAAGCTGCTGACAGTGCAACTGCGAGAAGGCTATGGGCGCATCCCACGCGGGGCCCTGCTGCAGAT  
GGACGCCATAGATCTCACTGACAACTTGTGAGTACTATCTGGAGTCGATGGCTTGGAGCTCACAATG  
ACTGTGCTTAGAGACATGGGCTTACAGGAGCTGGCTGAGCAGCTGCAAACGACTAAAGAAGAGTCTGGAG  
CTGTGGCAGCTGCAGCCAGTGTCCCTGCTCAGAGTACAGCCAGAACAGGACACTTTGTGGACCAGCACAG  
GCAAGCACTCATTGCCAGGGTCACAGAAGTGGACGGAGTGTGGATGCTTTGCATGGCAGTGTGCTGACT  
GAAGGACAGTACCAGGCAGTTTCGTGCAGAGACCACAGCCAAGACAAGATGAGGAAGCTCTTCAGCTTTG  
TTCCATCTGGAACCTGACCTGCAAGGACTCCCTCCTCCAGGCCTTGAAGGAAATACATCCCTACTTGGT  
GATGGACCTGGAGCAGAGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG201872 representing NM\_023258  
Red=Cloning site Green=Tags(s)

MGRARDAILDALENLSGDELKKFKMKLLTVQLREGYGRIPRGALLQMDAIDLTDKLVSYYLESYGLELTM  
 TVLRDMGLQELAEQLQTKEESGAVAAAASVPAQSTARTGHFVDQHRQAL IARVTEVDGVLDAHGSVLT  
 EGQYQAVRAETTSQDKMRKLF SFVPSWNLTKDSLLQALKEIHPYLVMDLEQS

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI


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## Cloning Scheme:



ACCN: NM\_023258

ORF Size: 579 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM\\_023258.4](#)

RefSeq Size: 1286 bp

RefSeq ORF: 582 bp

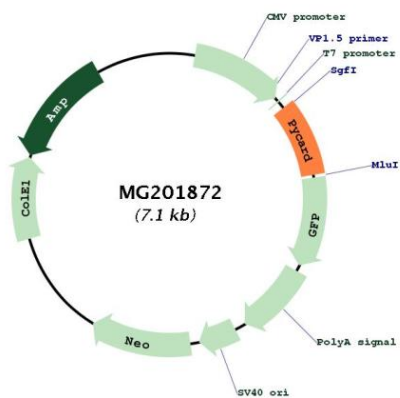
Locus ID: 66824

**UniProt ID:** [Q9EPB4](#)

**Cytogenetics:** 7 F3

**Gene Summary:** Functions as key mediator in apoptosis and inflammation. Promotes caspase-mediated apoptosis involving predominantly caspase-8 and also caspase-9 in a probable cell type-specific manner. Involved in activation of the mitochondrial apoptotic pathway, promotes caspase-8-dependent proteolytic maturation of BID independently of FADD in certain cell types and also mediates mitochondrial translocation of BAX and activates BAX-dependent apoptosis coupled to activation of caspase-9, -2 and -3. Involved in macrophage pyroptosis, a caspase-1-dependent inflammatory form of cell death and is the major constituent of the ASC pyroptosome which forms upon potassium depletion and rapidly recruits and activates caspase-1. In innate immune response believed to act as an integral adapter in the assembly of the inflammasome which activates caspase-1 leading to processing and secretion of proinflammatory cytokines. The function as activating adapter in different types of inflammasomes is mediated by the pyrin and CARD domains and their homotypic interactions. Required for recruitment of caspase-1 to inflammasomes containing certain pattern recognition receptors, such as NLRP2, NLRP3, AIM2 and probably IFI16. In the NLRP1 and NLRC4 inflammasomes seems not be required but facilitates the processing of procaspase-1. In cooperation with NOD2 involved in an inflammasome activated by bacterial muramyl dipeptide leading to caspase-1 activation. May be involved in DDX58-triggered proinflammatory responses and inflammasome activation. In collaboration with AIM2 which detects cytosolic double-stranded DNA may also be involved in a caspase-1-independent cell death that involves caspase-8. In adaptive immunity may be involved in maturation of dendritic cells to stimulate T-cell immunity and in cytoskeletal rearrangements coupled to chemotaxis and antigen uptake may be involved in post-transcriptional regulation of the guanine nucleotide exchange factor DOCK2; the latter function is proposed to involve the nuclear form. Also involved in transcriptional activation of cytokines and chemokines independent of the inflammasome; this function may involve AP-1, NF-kappa-B, MAPK and caspase-8 signaling pathways. For regulation of NF-kappa-B activating and inhibiting functions have been reported. Modulates NF-kappa-B induction at the level of the IKK complex by inhibiting kinase activity of CHUK and IKBK. Proposed to compete with RIPK2 for association with CASP1 thereby down-regulating CASP1-mediated RIPK2-dependent NF-kappa-B activation and activating interleukin-1 beta processing. Modulates host resistance to DNA virus infection, probably by inducing the cleavage of and inactivating CGAS in presence of cytoplasmic double-stranded DNA (PubMed:28314590).[UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for MG201872