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# Product datasheet for RC214314L1V

## CACNA1A (NM_000068) Human Tagged ORF Clone Lentiviral Particle

### Product data:

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| **Product Type:** | Lentiviral Particles |
| **Product Name:** | CACNA1A (NM_000068) Human Tagged ORF Clone Lentiviral Particle |
| **Symbol:** | CACNA1A |
| **Synonyms:** | APCA; BI; CACNL1A4; CAV2.1; DEE42; EA2; EIEE42; FHM; HPCA; MHP; MHP1; SCA6 |
| **Mammalian Cell Selection:** | None |
| **Vector:** | pLenti-C-Myc-DDK (PS100064) |
| **Tag:** | Myc-DDK |
| **ACCN:** | NM_000068 |
| **ORF Size:** | 6798 bp |
| **ORF Nucleotide Sequence:** | The ORF insert of this clone is exactly the same as(RC214314). |
| **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. |
| **RefSeq:** | NM_000068.3 |
| **RefSeq Size:** | 8641 bp |
| **RefSeq ORF:** | 6801 bp |
| **Locus ID:** | 773 |
| **UniProt ID:** | O00555 |
| **Cytogenetics:** | 19p13.13 |
| **Protein Families:** | Druggable Genome, Ion Channels: Calcium, Transmembrane |

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| **Protein Pathways:** | Calcium signaling pathway, Long-term depression, MAPK signaling pathway, Taste transduction, Type II diabetes mellitus |
| **MW:** | 257.3 kDa |
| **Gene Summary:** | Voltage-dependent calcium channels mediate the entry of calcium ions into excitable cells, and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, and gene expression. Calcium channels are multisubunit complexes composed of alpha-1, beta, alpha-2/delta, and gamma subunits. The channel activity is directed by the pore-forming alpha-1 subunit, whereas, the others act as auxiliary subunits regulating this activity. The distinctive properties of the calcium channel types are related primarily to the expression of a variety of alpha-1 isoforms, alpha-1A, B, C, D, E, and S. This gene encodes the alpha-1A subunit, which is predominantly expressed in neuronal tissue. Mutations in this gene are associated with 2 neurologic disorders, familial hemiplegic migraine and episodic ataxia 2. This gene also exhibits polymorphic variation due to (CAG)n-repeats. Multiple transcript variants encoding different isoforms have been found for this gene. In one set of transcript variants, the (CAG)n-repeats occur in the 3' UTR, and are not associated with any disease. But in another set of variants, an insertion extends the coding region to include the (CAG)n-repeats which encode a polyglutamine tract. Expansion of the (CAG)n-repeats from the normal 4-18 to 21-33 in the coding region is associated with spinocerebellar ataxia 6. [provided by RefSeq, Jul 2016] |