

Product datasheet for **RC222554**

D4S234E (NSG1) (NM_014392) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: D4S234E (NSG1) (NM_014392) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: D4S234E
Synonyms: D4S234; D4S234E; NEEP21; P21
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC222554 representing NM_014392
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGTGAAGTTGGGAACAATTTTCGAGAGAAGGGCACCAAGCAGCCGCTGCTGGAGGATGGCTTCGACA
 CCATTCCTGATGACGCCCTCGATGTCAATCAGCTGCAGTTCCTCCGCCCGGATAAGGTGTCGTGAA
 AACTAAGACCGAGTATGAACCTGACCGCAAGAAAGGGAAAGCACGTCCTCCCAAATTTGCTGAGTTCACC
 GTCAGCATCACGGAGGTGTACCGAGAGGTTAAGGTCTCCGTGTTGGTCTCTTCGCCCTGGCCTTCC
 TCACCTGCGTCGTTCTTCTGTTGTCTACAAGGTGTACAAGTATGACCGGCCTGCCCGATGGGTTCGT
 CCTCAAGAACACCCAGTGCATCCCAGAAGGCTTGAGAGCTACTACGCGGAGCAAGACTCCAGTGCCCGG
 GAGAAATTTTACACAGTCATAAACCACTACAACCTGGCCAAGCAGAGCATCACGCGCTCCGTATCGCCCT
 GGATGTGAGTCTGTGAGAGAGAGCTGTCCGAGCAGGAGACTGAAGCGGCTGAGAAGTCAAGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC222554 representing NM_014392
 Red=Cloning site Green=Tags(s)
 MVKLGNNFAEKGTKQPLLEDGFDTIPLMTPLDVNQLQFPPDPKVVVTKTEYEPDRKKGKARPPQIAEFT
 VSITEGVTERFKVSVLVLFALFLTCVVFLVVYKVKYDRACPDGFVLKNTQCIPEGLESYYAEQDSSAR
 EKFYTVINHYNLAKQSITRSVSPWMSVLSEEKLEQETEAEEKSA

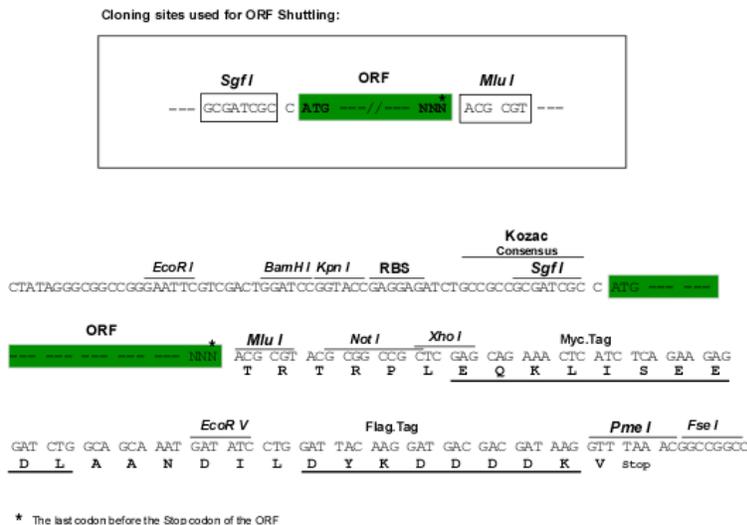
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg3289_g05.zip



Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_014392

ORF Size: 555 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_014392.5](#)

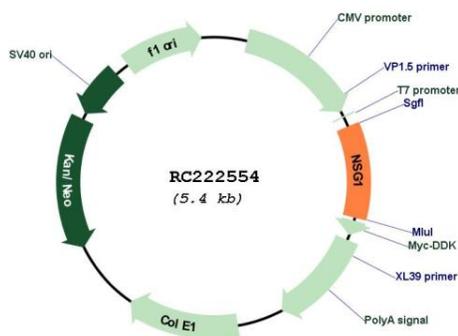
RefSeq Size: 1517 bp

RefSeq ORF: 558 bp

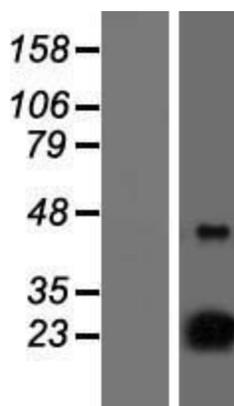
Locus ID: 27065
UniProt ID: [P42857](#)
Cytogenetics: 4p16.3
Protein Families: Druggable Genome, Transmembrane
MW: 20.7 kDa

Gene Summary: Plays a role in the recycling mechanism in neurons of multiple receptors, including AMPAR, APP and L1CAM and acts at the level of early endosomes to promote sorting of receptors toward a recycling pathway. Regulates sorting and recycling of GRIA2 through interaction with GRIP1 and then contributes to the regulation of synaptic transmission and plasticity by affecting the recycling and targeting of AMPA receptors to the synapse (By similarity). Is required for faithful sorting of L1CAM to axons by facilitating trafficking from somatodendritic early endosome or the recycling endosome (By similarity). In an other hand, induces apoptosis via the activation of CASP3 in response to DNA damage (PubMed:20599942, PubMed:20878061).[UniProtKB/Swiss-Prot Function]

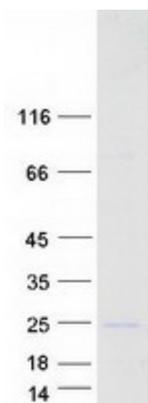
Product images:



Circular map for RC222554



Western blot validation of overexpression lysate (Cat# [LY415315]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222554 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NSG1 protein (Cat# [TP322554]). The protein was produced from HEK293T cells transfected with NSG1 cDNA clone (Cat# RC222554) using MegaTran 2.0 (Cat# [TT210002]).