

## Product datasheet for **RC201454**

### **RASD2 (NM\_014310) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	RASD2 (NM_014310) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RASD2
Synonyms:	Rhes; TEM2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201454 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGATGAAGACTTTGTCCAGCGGGAAGTGCACGCTCAGTGTGCCCGCCAAAACTCATACCGCATGGTGG  
TGCTGGGTGCCTCTCGGGTGGGCAAGAGCTCCATCGTGTCTCGCTTCTCAATGGCCGCTTTGAGGACCA  
GTACACACCCACCATCGAGGACTTCCACCGTAAGGTATAACAACATCCGCGGCGACATGTACCAGCTCGAC  
ATCCTGGATACCTCTGGCAACCACCCCTTCCCCGCATGCGCAGGCTGTCCATCCTCACAGGGGATGTCT  
TCATCCTGGTGTTCAGCCTGGATAACCGGGAGTCTTCGATGAGGTCAAGCGCCTCAGAAGCAGATCCT  
GGAGGTCAAGTCCTGCCTGAAGAACAAGACCAAGGAGGCGCGGAGCTGCCCATGGTCATCTGTGGCAAC  
AAGAACGACCACGGCGAGCTGTGCCGCCAGGTGCCACCAACCGAGCCGAGCTGTGGTGTCTGGGCGACG  
AGAAGTGCCTACTTCGAGGTGTCTGGCCAAGAAGAACAACCAACGTGGACGAGATGTTCTACGTGCTCTT  
CAGCATGGCCAAGCTGCCACACGAGATGAGCCCCGCCCTGCATCGCAAGATCTCCGTGCAGTACGGTGAC  
GCCTTCCACCCAGGCCCTTCTGCATGCGCCGCGTCAAGGAGATGGACGCCTATGGCATGGTCTCGCCCT  
TCGCCCCCGCCAGCGTCAACAGTGACCTCAAGTACATCAAGGCCAAGGTCTTCGGGAAGGCCAGGC  
CCGTGAGAGGGACAAGTGCACCATCCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC201454 protein sequence  
 Red=Cloning site Green=Tags(s)

```
MMKTLSSGNCTLSVPAKNSYRMVVLGASRVGKSSIVSRFLNGRFEDQYTPPTIEDFHRKVVYNIIRGDMYQLD
ILDTSGNHPPFAMRRLSILTGDFILVFLSNDNRESFDEVKRLQKQILEVK SCLKNKTKEAAELPMVICGN
KNDHGELCRQVPTTEAELLVSGDENCA YFEVSAKKNNTNVD E M F Y V L F S M A K L P H E M S P A L H R K I S V Q Y G D
AFHPRPFCMRRVKEMDAYGMVSPFARRPSVNSDLKYIKAKV L R E G Q A R E R D K C T I Q
```

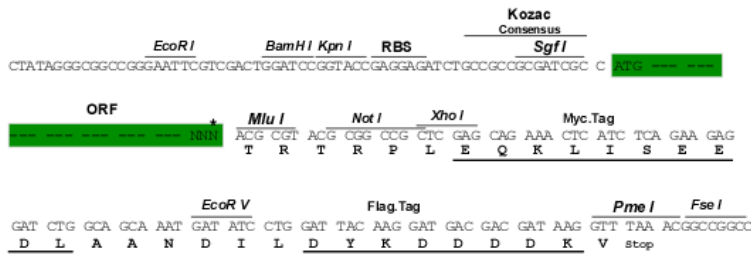
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6576\\_b09.zip](https://cdn.origene.com/chromatograms/mk6576_b09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_014310

**ORF Size:** 798 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\\_014310.4](#)

**RefSeq Size:** 3047 bp

**RefSeq ORF:** 801 bp

**Locus ID:** 23551

**UniProt ID:** [Q96D21](#)

**Cytogenetics:** 22q12.3

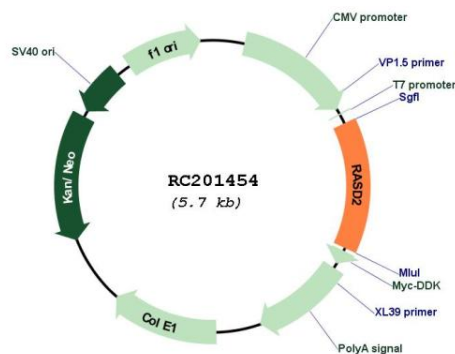
**Domains:** ras, RAN, RAS, RHO, RAB

**Protein Families:** Druggable Genome

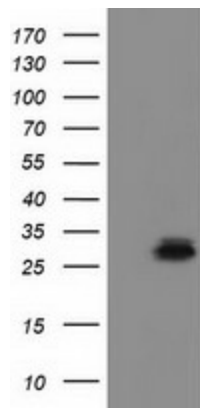
**MW:** 30.4 kDa

**Gene Summary:** This gene belongs to the Ras superfamily of small GTPases and is enriched in the striatum. The encoded protein functions as an E3 ligase for attachment of small ubiquitin-like modifier (SUMO). This protein also binds to mutant huntingtin (mHtt), the protein mutated in Huntington disease (HD). Sumoylation of mHTT by this protein may cause degeneration of the striatum. The protein functions as an activator of mechanistic target of rapamycin 1 (mTOR1), which in turn plays a role in myelination, axon growth and regeneration. Reduced levels of mRNA expressed by this gene were found in HD patients. [provided by RefSeq, Jan 2016]

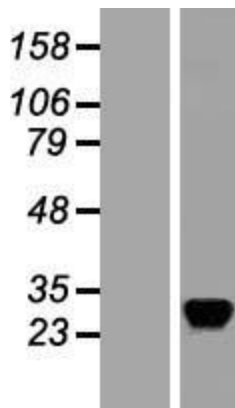
## Product images:



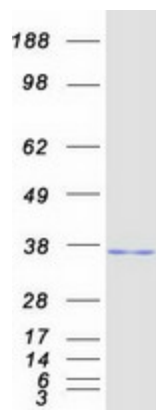
Circular map for RC201454



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY RASD2 (Cat# RC201454, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-RASD2 (Cat# [TA501978]). Positive lysates [LY415366] (100ug) and [LC415366] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY415366]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201454 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RASD2 protein (Cat# [TP301454]). The protein was produced from HEK293T cells transfected with RASD2 cDNA clone (Cat# RC201454) using MegaTran 2.0 (Cat# [TT210002]).