

## Product datasheet for **RR202500**

### Smarce1 (NM\_001024993) Rat Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Smarce1 (NM_001024993) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Smarce1
Synonyms:	BAF57; RGD1304726
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RR202500 representing NM_001024993 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGC**

ATGTCAAAAAGACCATCTTATGCCCCACCTCCACCCAGCTCCTGCAACAGCGTCCTCCGGCATTACAA  
 TCCCAAAGCCTCCAAAGCCACCAGATAAGCCGCTCATGCCCTACATGAGGTACAGCAGAAAGGTCTGGGA  
 CCAAGTAAAGGCTTCAACCCTGACCTAAAGTTGTGGGAGATTGGCAAGATTATTGGTGGCATGTGGCGA  
 GATCTCACTGATGAAGAGAAAACAAGAATATTTAAACGAGTACGAAGCAGAAAAGATAGAGTACAATGAAT  
 CTATGAAGGCCTATCACAATCCCTGCATACCTTGCATATATTAATGCAAAAAGTCGTGCGGAAGCTGC  
 ATTAGAGGAAGAAAGTCGACAGAGACAGTCGCGCATGGAGAAAGGAGAGCCTTACATGAGCATTCAGCCT  
 GCGGAGGACCCAGACGATTATGATGACGGCTTTTCAATGAAGCATACAGCCACTGCCCGTTTCCAGAGAA  
 ACCACCGCCTCATCAGTGAGATCCTCAGTGAGAGTGTGGTACCTGATGTGCGGTGCGTTGTCAACACAGC  
 TAGAATGCAAGTCCTCAAGCGACAGGTCCAGTCTTTAATGGTTCATCAGCGGAACTAGAAGCCGAGCTT  
 CTTAGATAGAGGAACGACACCAGGAAAAGAAGAGGAAATTCCTGGAAAGCACAGACTCCTTTAAACATG  
 AGCTTAAAGGCTGTGTGGTCTGAAGGTGGAAGTGGACATGGAGAAGATTGCAGCAGAGATCGCACAGGC  
 GGAGGAGCAGGCCCGAAAAGGCAGGAGGAGAGGAGAAGGAGGCAGCCAGCAAGCTGAGCGCAGCCAG  
 GGCAGCATCGCCCCGAGGAAGCAAGTGGCGAACAAGCCGAGGAGAAGAAGGATGAGGAGAACATCC  
 CGATGGAGACAGAGGAGACACCTTGAAGACACTGCGGAGAACCAGCAGAATGGTGAAGAAGGCACATC  
 TACTCCTGAGGACAAGGAGAGTGGGCAGGAGGGGTTGACAGCATGGAGGTGGAAGGGACCAAGTACAGT  
 AACACCGGCTCAGAGAGCAACAGCGCAACGGTGGAGGAGCCGCCACGGACCCTGTGCCAGAAGACGAGA  
 AGAAGGAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA


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**Protein Sequence:** >RR202500 representing NM\_001024993

Red=Cloning site    Green=Tags(s)

MSKRPSYAPPPTAPATASSGITIPKPPKPPDKPLMPYMRYSRKVVDQVKASNPDLKLWEIGKIIIGMWRLTDEEKQEYLNEYEAKEIENESMKAYHNSPAYLAYINAKSRAEAALEESRQRQSRMEKGEPYMSIQPAEDPDYDDGFSMKHTATARFQRNHRLISEILSESVVPDVRSVTTARMQVLKRQVQSLMVHQRLKLEALLQIEERHQEKRRKFLESTDSFNNELKRLCGLKVEYDMEKIAAEIAQAEQARKRQEEREKEAAEAERSQGTIAPEEEQVANKAEKKDEENIPMETEETHLEDTAENQNGEESTPDEKESGQEGVDSMEVEGTSDSNSIGSENSATVEEPTDPVPDEKKE

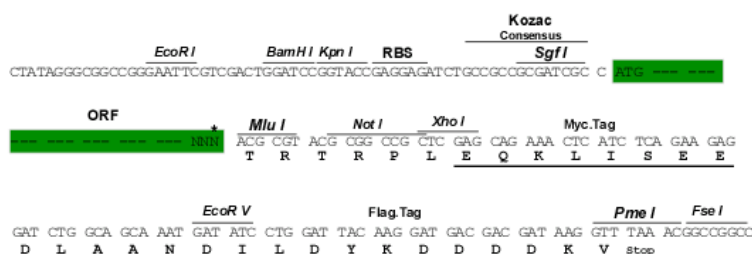
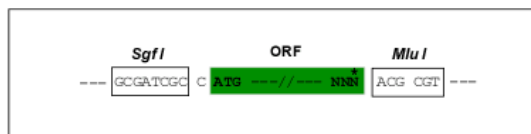
TRTRPLEOKLISEEDLAANDILDYKDDDDKV

### Restriction Sites:

Sgfl-MluI

### Cloning Scheme:

Cloning sites used for ORF Shuttling:



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

ACCN: NM 001024993

ORF Size: 1128 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\\_001024993.1](#), [NP\\_001020164.1](#)

**RefSeq Size:** 2200 bp

**RefSeq ORF:** 1131 bp

**Locus ID:** 303518

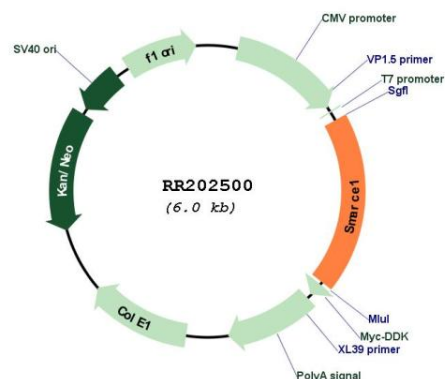
**UniProt ID:** [Q56A18](#)

**Cytogenetics:** 10q31

**MW:** 42.8 kDa

**Gene Summary:** Involved in transcriptional activation and repression of select genes by chromatin remodeling (alteration of DNA-nucleosome topology). Component of SWI/SNF chromatin remodeling complexes that carry out key enzymatic activities, changing chromatin structure by altering DNA-histone contacts within a nucleosome in an ATP-dependent manner. Belongs to the neural progenitors-specific chromatin remodeling complex (npBAF complex) and the neuron-specific chromatin remodeling complex (nBAF complex). During neural development a switch from a stem/progenitor to a postmitotic chromatin remodeling mechanism occurs as neurons exit the cell cycle and become committed to their adult state. The transition from proliferating neural stem/progenitor cells to postmitotic neurons requires a switch in subunit composition of the npBAF and nBAF complexes. As neural progenitors exit mitosis and differentiate into neurons, npBAF complexes which contain ACTL6A/BAF53A and PHF10/BAF45A, are exchanged for homologous alternative ACTL6B/BAF53B and DPF1/BAF45B or DPF3/BAF45C subunits in neuron-specific complexes (nBAF). The npBAF complex is essential for the self-renewal/proliferative capacity of the multipotent neural stem cells. The nBAF complex along with CREST plays a role regulating the activity of genes essential for dendrite growth (By similarity). Required for the coactivation of estrogen responsive promoters by SWI/SNF complexes and the SRC/p160 family of histone acetyltransferases (HATs). Also specifically interacts with the CoREST corepressor resulting in repression of neuronal specific gene promoters in non-neuronal cells (By similarity).[UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for RR202500