

## Product datasheet for RN202500

### Smarce1 (NM\_001024993) Rat Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Smarce1 (NM\_001024993) Rat Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Smarce1  
**Synonyms:** BAF57; RGD1304726  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >RN202500 representing NM\_001024993  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGTCAAAAAGACCATCTTATGCCCCACCTCCCACCCAGCTCCTGCAACAGCGTCCTCCGGCATTACAA  
 TCCCAAAGCCTCCAAAGCCACCAGATAAGCCGCTCATGCCCTACATGAGGTACAGCAGAAAGGTCTGGGA  
 CCAAGTAAAGGCTTCCAACCCTGACCTAAAGTTGTGGGAGATTGGCAAGATTATTGGTGGCATGTGGCGA  
 GATCTCACTGATGAAGAGAAACAAGAATATTTAAACGAGTACGAAGCAGAAAAGATAGAGTACAATGAAT  
 CTATGAAGGCCTATCACAAATCCCTGCATACCTTGATATATTAATGCAAAAAGTCGTGCGGAAGCTGC  
 ATTAGAGGAAGAAAGTCGACAGAGACAGTCCGCGCATGGAGAAAGGAGAGCCTTACATGAGCATTACGCT  
 GCGGAGGACCCAGACGATTATGATGACGGCTTTCAATGAAGCATACAGCCACTGCCCGTTTCCAGAGAA  
 ACCACCGCCTCATCAGTGAGATCCTCAGTGAGAGTGTGGTACCTGATGTGCGGTGCGTTGTCACAACAGC  
 TAGAATGCAAGTCCTCAAGCGACAGGTCCAGTCTTTAATGGTTCATCAGCGGAACTAGAAGCCGAGCTT  
 CTCAGATAGAGGAACGACACCAGGAAAAGAAGAGGAAATCCTGGAAAGCACAGACTCCTTTAAACAATG  
 AGCTTAAAAGGCTGTGTGGTCTGAAGGTGGAAGTGGACATGGAGAAGATTGCAGCAGAGATCGCACAGCG  
 GGAGGAGCAGGCCGCAAAAGGCAGGAGGAGAGGAGGAGAAGGAGGAGCCGAGCAAGCTGAGCGCAGCCAG  
 GGACAGCATCGCCCCGAGGAAGAGCAAGTGGCGAACAAGCCGAGGAGAAGGATGAGGAGAATCC  
 CGATGGAGACAGAGGAGACACACCTTGAAGACTGCGGAGAACCAGCAGAAATGGTGAAGAAGGCACATC  
 TACTCCTGAGGACAAGGAGAGTGGGAGGAGGGGTTGACAGCATGGAGGTGGAAGGGACCAAGTACAGT  
 AACACCGGCTCAGAGAGCAACAGCGCAACGGTGGAGGAGCCGCCACGGACCTGTGCCAGAAGACGAGA  
 AGAAGGA**TAA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI



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<b>ACCN:</b>	NM_001024993
<b>Insert Size:</b>	1131 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_001024993.1, NP_001020164.1</u>
<b>RefSeq Size:</b>	2200 bp
<b>RefSeq ORF:</b>	1131 bp
<b>Locus ID:</b>	303518
<b>UniProt ID:</b>	<u>Q56A18</u>
<b>Cytogenetics:</b>	10q31

**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]