

## Product datasheet for **RC234497**

### SMOX (NM\_001270691) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SMOX (NM_001270691) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMOX
Synonyms:	C20orf16; PAO; PAO-1; PAO1; PAOH; PAOH1; SMO
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC234497 representing NM\_001270691  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCAAAGTTGTGAATCCAGTGGTGACAGTGGGATGACCTCTCAGTCGCGCCTACGGAGAAGGGGAC  
 AGCCTCGTGTGGTGGTATCGGCCCGGCTTGGCTGGCCTGGCTGCAGCCAAAGCACTTCTTGAGCAGGG  
 TTTCACGGATGTCACTGTGCTTGAAGCTTCCAGCCACATCGGAGGCCGTGTGCAGAGTGTGAAACTTGGA  
 CACGCCACCTTTGAGCTGGGAGCCACCTGGATCCATGGCTCCCATGGAAACCCTATCTATCATCTAGCAG  
 AAGCCAACGGCCTCCTGGAAGAGACAACCGATGGGGAACGCAGCGTGGGCCGCATCAGCCTCTATCCAA  
 GAATGGCGTGGCCTGCTACCTTACCAACCACGGCCGAGGATCCCAAGGACGTGGTTGAGGAATTCAGC  
 GATTTATACAACGAGGTCTAATACTTGACCCAGGAGTTCTCCGGCAGGATAAACCAAGTCAATGCTGAAA  
 GTCAAAATAGCGTGGGGGTGTTACCCGAGAGGAGGTGCGTAACCGCATCAGGAATGACCCTGACGACCC  
 AGAGGCTACCAAGCGCCTGAAGCTCGCCATGATCCAGCAGTACCTGAAGTGGAGAGCTGTGAGAGCAGC  
 TCACACAGCATGGACGAGGTGTCCCTGAGCGCCTTCGGGGAGTGGACCGAGATCCCCGGCGCTCACCACA  
 TCATCCCCTCGGGCTTCATGCGGGTGTGGAGCTGCTGGCGGAGGGCATCCCTGCCACGTCATCCAGCT  
 AGGGAAACCTGTCCGCTGCATTCAGTGGGACCAGGCCTCAGCCCGCCCCAGAGGCCCTGAGATTGAGCCC  
 CGGGGTGAGGGCGACCACAATCACGACACTGGGGAGGGTGGCCAGGGTGGAGAGGAGCCCCGGGGGGGCA  
 GGTGGGATGAGGATGAGCAGTGGTGGTGGTGGAGTGCAGGACTGTGAGCTGATCCCGGGGACCA  
 TGTGATTGTGACCGTGTGCTAGGTGTGCTAAAGAGGCAGTACACCAGTTTCTCCGGCCAGGCCTGCC  
 ACAGAGAAGTGGCTGCCATCCACCGCTGGGCATTGGCACCACGACAAGATCTTCTGGAATTCGAGG  
 AGCCCTTCTGGGGCCTGAGTGCAACAGCCTACAGTTTGTGTGGGAGGACGAAGCAGAGCCACACCCCT  
 CACCTACCCACCTGAGCTCTGGTACCGCAAGACTGCGGGCTTGTGTCCTCTACCCGCCTGAGCGCTAC  
 GGCCATGTGCTGAGCGGCTGGATCTGCGGGGAGGAGGCCCTCGTCATGGAGAAGTGTGATGACGAGGCGAG  
 TGGCCGAGATCTGCACGGAGATGCTGCGTCAGTTCACAGGGAACCCCAACATTCCAAAACCTCGGCGAAT  
 CTTGCGCTCGGCCTGGGGCAGCAACCTTACTCCGCGGCTCCTATTACACGAGGTTGGGCTCCAGC  
 GGGGCGGATGTGGAGAAGCTGGCCAAGCCCTGCCGTACACAGAGAGCTCAAAGACAGCGCATGGAAGCT  
 CCACAAAGCAGCAGCCTGGTACCTTTTCTTCCAAGTGCCAGAACAGCCCTGGATGCTAACAGGGG  
 CGCCGTAAGCCCATGCAGGTGCTGTTTTCCGGTGAAGCCACCCACCGCAAGTACTATCCACCACCCAC  
 GGTGCTCTGCTGTCGGCCAGCGTGAAGGCTGCCCGCTCATTGAGATGTACCGAGACCTCTCCAGCAGG  
 GGACC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC234497 representing NM\_001270691  
 Red=Cloning site Green=Tags(s)

MQSCESSGDSADDPLSRGLRRRQPRVVVIGAGLAGLAAAKALLEQGFTDVTVLEASSHIGGRVQSVKLG  
 HATFELGATWIHGSHGNPIYHLAEANGLLEETTDGERSVGRISL YSKNGVACYL TNHRRIPKDVVEEFS  
 DLYNEVYNL TQEFFRHKPVNAESQNSVGVF TREEVRNRIRNDPDDPEATKRLKLAMIQQYLKVESCESS  
 SHSMDEVSL SAFGEWTE IPGAHHI IPSGFMRVVELLAEGIPAHVIQLGKPVRCIHWDQASARPRGPEIEP  
 RGEDHNHDTGEGGQGGEEPRGRWDEDEQWSVVVECEDCELIPADHVIIVTVSLGVLKRQYTSFFRPGLP  
 TEKVAAIHRLLGIGTTDKIFLEFEFPFWGPECNSLQFVWEDEAESHTLTYPELWYRKICGFVLYPPER  
 GHVLSGWICGEEALVMEKCDDEAVAEICTEMLRQFTGNPNIPKPRRILRSAGWSNPYFRGSYSYTVQVSS  
 GADVEKLA KPLPYTESSKTAHGSSTKQQPGLFSSKCEPQLDANRGAVKPMQVLFSGEATHRKYSTTH  
 GALLSGQREARLIEMYRDLFQQGT

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001270691

**ORF Size:** 1755 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\\_001270691.1](#), [NP\\_001257620.1](#)

**RefSeq Size:** 2339 bp

**RefSeq ORF:** 1758 bp

**Locus ID:** 54498

**UniProt ID:** [Q9NWM0](#)

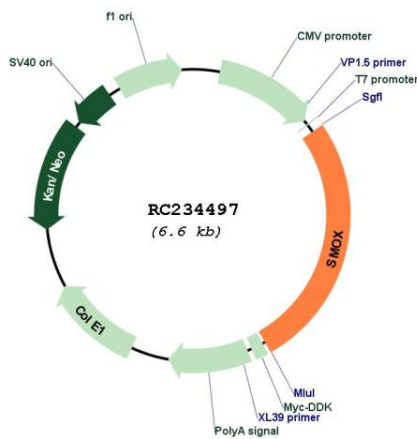
**Cytogenetics:** 20p13

**Protein Families:** Druggable Genome

**MW:** 65.5 kDa

**Gene Summary:** Polyamines are ubiquitous polycationic alkylamines which include spermine, spermidine, putrescine, and agmatine. These molecules participate in a broad range of cellular functions which include cell cycle modulation, scavenging reactive oxygen species, and the control of gene expression. These molecules also play important roles in neurotransmission through their regulation of cell-surface receptor activity, involvement in intracellular signalling pathways, and their putative roles as neurotransmitters. This gene encodes an FAD-containing enzyme that catalyzes the oxidation of spermine to spermadine and secondarily produces hydrogen peroxide. Multiple transcript variants encoding different isoenzymes have been identified for this gene, some of which have failed to demonstrate significant oxidase activity on natural polyamine substrates. The characterized isoenzymes have distinctive biochemical characteristics and substrate specificities, suggesting the existence of additional levels of complexity in polyamine catabolism. [provided by RefSeq, Jul 2012]

**Product images:**



Circular map for RC234497