

## Product datasheet for **SC313989**

### **SMOX (NM\_175839) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	SMOX (NM_175839) Human Untagged Clone
Tag:	Tag Free
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)



[View online »](#)

**Fully Sequenced ORF:** >SC313989 representing NM\_175839.  
 Blue=Insert sequence Red=Cloning site Green=Tag(s)

```

GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGCAAAGTTGTGAATCCAGTGGTGACAGTGCGGATGCCCTCTCAGTCGCGGCCTACGGAGAAGGGGA
CAGCCCTCGTGTGGTGGTATCGGCGCCGGCTTGGCTGGCTGCAGCCAAAGCACTTCTTGAGCAG
GGTTTACGGATGTCACGTGCTTGGAGCTTCCAGCCACATCGGAGGCCGTGTGCAGAGTGTGAACTT
GGACACGCCACCTTTGAGCTGGGAGCCACTGGATCCATGGCTCCCATGGGAACCTATCTATCATCTA
GCAGAAGCCAACGGCCTCCTGGAAGAGACAACCGATGGGGAACGCAGCGTGGGCCGCATCAGCCTCTAT
TCCAAGAATGGCGTGGCCTGCTACCTTACCAACCACGGCCGAGGATCCCCAAGGACGTGGTTGAGGAA
TTCAGCGATTTATAACAACGAGGTCTATAACTTGACCCAGGAGTCTTCCGGCACGATAAACCAGTCAAT
GCTGAAAGTCAAATAGCGTGGGGTGTTCACCCGAGAGGAGTGCCTAACCGCATCAGGAATGACCCT
GACGACCCAGAGGCTACCAAGCGCCTGAAGCTCGCCATGATCCAGCAGTACCTGAAGGTGGAGAGCTGT
GAGAGCAGCTCACACAGCATGGACGAGGTGCCCTGAGCGCCTTCGGGGAGTGGACCGAGATCCCCGGC
GCTCACACATCATCCCCTCGGGCTTCATGCGGGTGTGGAGCTGCTGGCGGAGGGCATCCCTGCCCAC
GTCATCCAGCTAGGGAAACCTGTCCGCTGCATTACTGGGACCAGGCCTCAGCCCGCCCCAGAGGCCT
GAGATTGAGCCCCGGGTGAGGGCGACCAATCACGACACTGGGGAGGGTGGCCAGGGTGGAGAGGAG
CCCCGGGGGGCAGGTGGGATGAGGATGAGCAGTGGTCCGTGGTGGTGGAGTGGCAGGACTGTGAGCTG
ATCCCGGCGGACCATGTGATTGTGACCGTGTGCTAGGTGTGCTAAAGAGGCAGTACACCAGTTTCTTC
CGGCCAGGCCTGCCACAGAGAAGGTGGCTGCCATCCACCGCCTGGGCATTGGCACCACCGACAAGATC
TTTCTGGAATTCGAGGAGCCCTTCTGGGGCCCTGAGTGAACAGCCTACAGTTTGTGTGGGAGGACGAA
GCAGAGAGCCACACCCTCACCTACCCACTGAGCTCTGGTACCGAAGATCTGCGGCTTTGATGCTCTC
TACCCGCCTGAGCGCTACGGCCATGTGCTGAGCGGCTGGATCTGCGGGGAGGAGGCCCTCGTCATGGAG
AAGTGTGATGACGAGGCAGTGGCCGAGATCTGCACGGAGATGCTGCGTCAAGTTCACAGGGAACCCCAAC
ATTCCAAAACCTCGGCGAATCTTGCCTCGGCCTGGGGCAGCAACCCTTACTTCCGCGGCTCCTATTCA
TACACGCAGGTGGGCTCCAGCGGGCGGATGTGGAGAAGCTGGCCAAGCCCTGCCGTACACAGAGAGC
TCAAAGACAGCGCCATGCAGGTGCTGTTTTCCGGTGGAGCCACCACCGCAAGTACTATTCCACCACC
CACGGTGTCTGTGCTGTCGGCCAGCGTGGGCTGCCCGCCTCATTGAGATGTACCAGACCTCTTCCAG
CAGGGGACCTGA
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTAAACGGCCGCGC
  
```

**Restriction Sites:** SgfI-MluI

**ACCN:** NM\_175839

**Insert Size:** 1668 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

<b>OTI Annotation:</b>	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
<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>	<a href="#">NM_175839.2</a>
<b>RefSeq Size:</b>	2249 bp
<b>RefSeq ORF:</b>	1668 bp
<b>Locus ID:</b>	54498
<b>UniProt ID:</b>	<a href="#">Q9NWM0</a>
<b>Cytogenetics:</b>	20p13
<b>Protein Families:</b>	Druggable Genome
<b>MW:</b>	61.8 kDa
<b>Gene Summary:</b>	<p>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]</p> <p>Transcript Variant: This variant (1) represents the most abundant transcript and encodes isoform (1), also known as PAOh1.</p>