

## Product datasheet for **SC110483**

### SMOX (NM\_175841) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SMOX (NM_175841) Human Untagged Clone
Tag:	Tag Free
Symbol:	SMOX
Synonyms:	C20orf16; PAO; PAO-1; PAO1; PAOH; PAOH1; SMO
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC110483 sequence for NM_175841 edited (data generated by NextGen Sequencing)

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ATGCAAAGTTGTGAATCCAGTGGTGACAGTGCGGATGACCCTCTCAGTCGCGCCTACGG
AGAAGGGGACAGCCTCGTGTGGTGGTATCGGCGCCGGCTTGGCTGGCCTGGCTGCAGCC
AAAGCACTTCTTGAGCAGGGTTTCACGGATGTCAGTGTGCTTGAGGCTTCCAGCCACATC
GGAGGCCGTGTGCAGAGTGTGAACTTGGACACGCCACCTTTGAGCTGGGAGCCACCTGG
ATCCATGGCTCCCATGGGAACCCATCTATCATCTAGCAGAAGCCAACGGCCTCCTGGAA
GAGACAACCGATGGGAACGCAGCGTGGGCCGATCAGCCTCTATTCCAAGAATGGCGTG
GCCTGCTACCTTACCAACCACGGCCGAGGATCCCAAGGACGTGGTTGAGGAATTCAGC
GATTTATAACAACGAGCCCATGCAGGTGCTGTTTTCCGGTGAGGCCACCCACCGCAAGTAC
TATTCCACCACCCACGGTCTGCTGTCCGGCCAGCGTGAGGCTGCCCGCCTCATTGAG
ATGTACCGAGACCTCTTCCAGCAGGGGACCTGA
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Clone variation with respect to NM\_175841.1



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<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_175841 unedited NNAAAAGGGGANAAAAAAACCCCGGGTTCAGAATTTGTNATACGACTCA TATNAGGCGGCCGCGNAATTCGCACGAGCTGGCTCGGGCCCTACGGTCCCGGCGGCGGC TGGAGGAGGAAGCCAGGCGGCTGGCGGAGGAGGAGACGGAGGAGCCGAGACCGGAGC GCCGCTCGCCGACAGCTTACTTCCCGGCTCAGCAGGGAAAGGTTCTAGAAAGGTGAGCG CGGACGGTATGCAAAGTTGTGAATCCAGTGGTGACAGTGCGGATGACCCTCTCAGTCGCG GCCTACGGAGAAGGGGACAGCCTCGTGTGGTGGTGATCGGCGCCGGCTTGGCTGGCCTGG CTGCAGCCAAAGCACTTCTTGAGCAGGGTTTACGGATGTCAGTGTGCTTGAGGCTTCCA GCCACATCGGAGGCCGTGTGCAGAGTGTGAAACTTGACACGCCACCTTTGAGCTGGGAG CCACCTGGATCCATGGCTCCCATGGGAACCCTATCTATCATCTAGCAGAAGCCAACGGCC TCCTGGAAGAGACAACCGATGGGGAACGCAGCGTGGGCCGATCAGCCTTATTCCAAGA ATGGCGTGGCCTGCTACCTTACCAACCACGGCCGAGGATCCCCAAGGACGTGGTTGAGG AATTCAGCGATTTATAACAACGAGGTCTATAACTGACCCAGGAGTTCTTCCGGCACGATA AACCGTCAATGCTGAAAGTCAAATAGCGTGGGNGTGTTCACCCGAGAGGGAGGTGCGT ACCGCATCAGGAATGACCCTGACGACCCAAGGCTACCAAGCGCCCTGAGCTCGCCATGAT CCCGCAGTACCTGAAGGTATCNNTGAGAAGACCGATTCTGGGGGGCGTCTGGGTCTGAGG AGGGCTACGCTGNTCCTACCCTGCCACCCCGGGGTACCTGCCTCTTCTGGGTCTCC
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_175841
<b>Insert Size:</b>	2400 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>	<a href="#">NM_175841.1</a> , <a href="#">NP_787035.1</a>
<b>RefSeq Size:</b>	1108 bp
<b>RefSeq ORF:</b>	573 bp
<b>Locus ID:</b>	54498
<b>UniProt ID:</b>	<a href="#">Q9NWM0</a>
<b>Cytogenetics:</b>	20p13
<b>Protein Families:</b>	Druggable Genome

**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 spermidine 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]

Transcript Variant: This variant (3) lacks an in-frame segment of the coding region, compared to variant 1. It encodes a shorter isoform (3), also known as PAOh3, that is missing an internal segment compared to isoform 1.