

Product datasheet for **RC223361**

SMOX (NM_175842) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMOX (NM_175842) 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:

>RC223361 representing NM_175842
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAAAGTTGTGAATCCAGTGGTGACAGTGGGATGACCTCTCAGTCGCGCCTACGGAGAAGGGGAC
 AGCCTCGTGTGGTGTATCGGCCCGGCTTGGCTGGCCTGGCTGCAGCCAAAGCACTTCTTGAGCAGGG
 TTTCACGGATGTCACTGTGCTTGTAGGCTTCCAGCCACATCGGAGGCCGTGTGCAGAGTGTGAAACTTGA
 CACGCCACCTTTGAGCTGGGAGCCACCTGGATCCATGGCTCCCATGGAAACCCTATCTATCATCTAGCAG
 AAGCCAACGGCCTCCTGGAAGAGACAACCGATGGGGAACGCAGCGTGGGCCGCATCAGCCTCTATCCAA
 GAATGGCGTGGCCTGCTACCTTACCAACCACGGCCGAGGATCCCCAAGGACGTGGTTGAGGAATTCAGC
 GATTTATACAACGAGGTCTATACTTGACCCAGGAGTTCTCCGGCACGATAAACAGTCAATGCTGAAA
 GTCAAAATAGCGTGGGGTGTTCACCCGAGAGGAGGTGCGTAACCGCATCAGGAATGACCCTGACGACCC
 AGAGGCTACCAAGCGCCTGAAGCTCGCCATGATCCAGCAGTACCTGAAGTGGAGAGCTGTGAGAGCAGC
 TCACACAGCATGGACGAGGTGTCCCTGAGCGCCTTCGGGGAGTGGACCGAGATCCCCGGCGCTCACCACA
 TCATCCCCTCGGGCTTCATGCGGGTGTGGAGCTGCTGGCGGAGGGCATCCCTGCCACGTCATCCAGCT
 AGGGAAACCTGTCCGCTGCATTCAGTGGGACCAGGCCTCAGCCCGCCAGAGGCCCTGAGATTGAGCCC
 CGGGGTGTGCTAAAGAGGCAGTACACCAGTTTCTTCCGGCCAGGCCTGCCACAGAGAAGGTGGCTGCCA
 TCCACCGCCTGGGCATTGGCACCACCGACAAGATCTTCTGGAATTCGAGGAGCCCTTCTGGGGCCCTGA
 GTGCAACAGCCTACAGTTTGTGTGGGAGGACGAAGCAGAGAGCCACACCCCTCACCTACCCACCTGAGCTC
 TGGTACCGCAAGATCTCGGGCTTTGATGTCTCTACCCGCCTGAGCGCTACGGCCATGTGCTGAGCGGT
 GGATCTCGGGGAGGAGGCCCTCGTCATGGAGAAGTGTGATGACGAGGCAGTGGCCGAGATCTGCACGGA
 GATGCTGCGTCAGTTCACAGGGAACCCCAACATTCAAAAACCTCGGCGAATCTTGCCTCGGCCTGGGGC
 AGCAACCCCTTACTTCCGGGCTCCTATTCATACACGCAGGTGGGCTCCAGCGGGCGGATGTGGAGAAGC
 TGGCAAGCCCCTGCCGTACACAGAGAGCTCAAAGACAGCGCATGGAAGCTCCACAAAGCAGCAGCCTGG
 TCACCTTTTCTTCCAAGTGCCAGAACAGCCCTGGATGCTAACAGGGGCGCCGTAAGCCCATGCAG
 GTGCTGTTTTCCGGTGGGCCACCCACCGCAAGTACTATTCCACCACCCAGGTGCTGCTGTCCGGCC
 AGCGTGAGGCTGCCCGCCTCATTGAGATGTACCGAGACCTCTCCAGCAGGGGACC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC223361 representing NM_175842
 Red=Cloning site Green=Tags(s)

MQSCESSGDSADDPLSRGLRRRQPRVVVIGAGLAGLAAAKALLEQFTDVTVLEASSHIGGRVQSVKLG
 HATFELGATWIHGSHGNPIYHLAEANGLLEETDGERSVGRISLYSKNGVACYLTNHGRRIPKDVVEEFS
 DLYNEVYNLTQEFFRHKPVAESQNSVGVFTREEVRNRIRNDPDDPEATKRLKLAMIQQYLKVESCESS
 SHSMDEVSLSAFGEWTEIPGAHHIIPSGFMRVVELLAEGIPAHVIQLGKPVRCIHWDQASARPRGPEIEP
 RGVLRQYTSFFRPGLPTEKVAAIHRIGITTDKIFLEFEFPFWGPECNSLQFVWEDEAESHTLTYPPEL
 WYRKICGFDVLYPPERYGHVLSGWICGEEALVMEKCDDEAVAEICTEMLRQFTGNPNIPKPRRILRSWAG
 SNPYFRGSYSYTVQSSGADVEKLAKPLPYTESKTAHGSSTKQQPGLHFSKCPQLDANRGAVKPMQ
 VLFSGEATHRKYYSTTHGALLSQREARLIEMYRDLFQQGT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8065_h01.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_175842

ORF Size: 1596 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_175842.3](#)

RefSeq Size: 2134 bp

RefSeq ORF: 1599 bp

Locus ID: 54498

UniProt ID: [Q9NWM0](#)

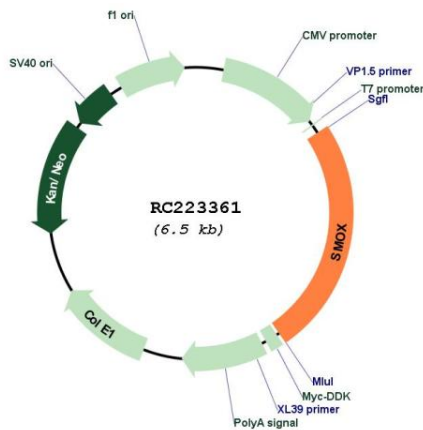
Cytogenetics: 20p13

Protein Families: Druggable Genome

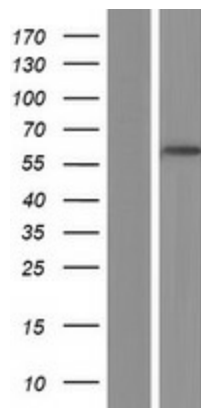
MW: 59.1 kDa

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 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]

Product images:



Circular map for RC223361



Western blot validation of overexpression lysate (Cat# [LY406226]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223361 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).