

Product datasheet for **MR219789**

Smox (NM_001177835) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Smox (NM_001177835) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Smox
Synonyms:	B130066H01Rik; PAO; PAOh1; SMO
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MR219789 representing NM_001177835
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAAAGTTGTGAATCCAGTGGCGACAGTGGGATGACCTCTCAGTCGTGGCCTACGGAGAAGGGGAC
 AGCCTCGTGTGGTGTGATCGGTGCTGGCTGGCTGGCTGCAGCTAGAGCCCTTCTGGAGCAGGG
 CTTACCGGATGCTACTGTGCTTGAAGCTTCCAGCCACATTGGGGCCGTGTGCAGAGTGTGAGGCTTGA
 GACACCACCTTTGAGCTGGGAGCCACCTGGATCCATGGATCCCACGGGAATCCTATCTATCAACTAGCAG
 AAGCCAATGGCCTTTTGAAGAGACAACAGATGGGGAGCGCAGTGTGGCCGCATCAGCCTTTACTCAA
 GAATGGCGTGGCCTGCTACCTTACCAACCGTGGCTGCCGCATCCCCAAGGACGTGGTTGAGGAATTCAGC
 GATTTATACAACGAGGTCTATAACATGACCCAGGAGTTCTTCCGGCATGGTAAACCAGTCAATGCCGAGA
 GTCAGAACAGCGTCGGGGTGTCCACCCGGGAGAAGGTGCGGAATCGCATCAGGGATGACCCTGACGACAC
 AGAGGCCACCAAGCGCCTGAAGCTCGCCATGATCCAGCAGTACCTGAAGGTGGAGAGCTGTGAGAGCAGC
 TCCACAGCATAGATGAGGTGTCCCTGAGCGCCTTTGGAGAATGGACGGAGATCCCAGGCCCCATCACA
 TCATCCCCTCGGGCTTATGCGAGTTGTGGAGCTGCTGGCTGAGGGCATTCTCCACATGTCATCCAGTT
 GGGGAAGCCGGTCCGTTGCATCCACTGGGACCAGGCCTCGGCTCACCCCGGGGTCTGAGATCGAGCCC
 CGTGGTGAAGGTGATCACAATCAGCAGCTGGGAGGGTGGCCAGAGTGGAGAGAATCCGCAGCAGGGGA
 GGTGGGACGAGGATGAGCCGTGGCTGTAGTCGTGGAGTGCAGGATTGCCAGGTGATCCAGCGGACCA
 CGTGATTGTGACCGTTTCGCTGGCGTGTCAAGAGGCAGTACACCAGTTCTTTAGGCCATGCCTGCC
 ACGGAGAAGGTGGCCGCCATCCACCGCTGGGCATTGGTACCAGTACAAGATCTTCTTGAATTTGAGG
 AGCCCTTTTGGGCCCCGAGTGCAACAGCCTGCAGTTCTGTGGGAGGATGAGGCAGAGCTGTACCT
 CACCTACCCACCTGAGCTCTGGTACCGCAAGATCTGTGGCTTCGATGTCCTTTATCCGCCAGAGCGCTAT
 GGCCATGTGCTGAGTGGCTGGATCTGTGGGAGGAGGCTCTTGTGATGGAGAGTGCATGACGAGGCTG
 TAGCTGAGATCTGCACAGAGATGCTTCGACAGTTCACAGCCATGCAGGTGCTCTTCTCCGGGGAGGCCA
 CACACCGCAAGTACTACTCCACCACCCAGGTGCTCTGCTCTCTGGCCAGCGGAGGCCCGCCGCTCAT
 CGAGATGTACCGAGACCTCTCCAGCAGGGGCCCTGAAAGGTGTCCTCACTGCCAAATGTGTTCT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR219789 representing NM_001177835
 Red=Cloning site Green=Tags(s)

MQSCSSGDSADDPLSRGLRRRQPRVVVIGAGLAGLAAARALLEQGFTDVTVLEASSHIGGRVQSVRLG
 DTFELGATWIHGSHGNPIYQLAEANGLLEETTDGERSVGRISL YSKNGVACYL TNRGCRIPKDVVEEFS
 DLYNEVYNMTQEFRRHGKPVNAESQNSVGVTREKVRNRIRDDPDDTEATKRLKLAMIQQYLKVESCESS
 SHSIDEVSLSAFGEWTEIPGAHHIIPSGFMRVVELLAEGIPPHVIQLGKPVRCIHWDQASAHPRGPEIEP
 RGEGDHNDTGEQQSGENPQQGRWDEDEPWVVECEDCEVIPADHVIITVSLGVLKRQYTSFFRPCLP
 TEKVAAIHRLLGIGTTDKIFLEFEFPFWGPECNSLQFVWEDEAESCTLTYPPELWYRKICGFDVLYPPERY
 GHVLSGWICGEEALVMERCDEAVAEICTEMLRQFTAAGALLRGHPTQVLLHHPRCSALWPARGRPAH
 RDVPRPLPAGALKGVLTAKCV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

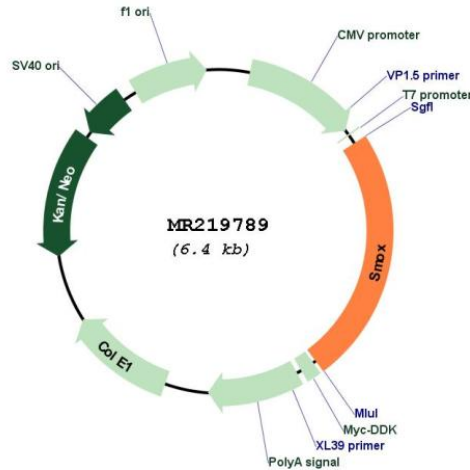
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

Plasmid Map:


ACCN: NM_001177835

ORF Size: 1536 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_001177835.1](#), [NP_001171306.1](#)

RefSeq Size: 2029 bp

RefSeq ORF: 1539 bp

Locus ID: 228608

UniProt ID: [Q99K82](#)

Cytogenetics: 2 F1

MW: 57.1 kDa

Gene Summary: Flavoenzyme which catalyzes the oxidation of spermine to spermidine. Can also use N(1)-acetylspermine and spermidine as substrates, with different affinity depending on the isoform (isozyme) and on the experimental conditions. Plays an important role in the regulation of polyamine intracellular concentration and has the potential to act as a determinant of cellular sensitivity to the antitumor polyamine analogs. May contribute to beta-alanine production via aldehyde dehydrogenase conversion of 3-amino-propanal. [UniProtKB/Swiss-Prot Function]