

Product datasheet for **SC309881**

smooth muscle Myosin heavy chain 11 (MYH11) (NM_022844) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: smooth muscle Myosin heavy chain 11 (MYH11) (NM_022844) Human Untagged Clone
Tag: Tag Free
Symbol: MYH11
Synonyms: AAT4; FAA4; SMHC; SMMHC; VSCM2
Vector: pCMV6 series
Fully Sequenced ORF: >NCBI ORF sequence for NM_022844, the custom clone sequence may differ by one or more nucleotides

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 GTGAACGCACTCAAGAGCAAGCTCAGAGGGCCCCCCCCACAGGAAACTTCGCAGTGA

Restriction Sites:	Please inquire
ACCN:	NM_022844
OTI Disclaimer:	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).
OTI Annotation:	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.
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:	<ol style="list-style-type: none"> 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:	<u>NM_022844.1, NP_074035.1</u>
RefSeq Size:	6900 bp
RefSeq ORF:	5817 bp
Locus ID:	4629
UniProt ID:	<u>P35749</u>
Cytogenetics:	16p13.11
Domains:	IQ, myosin_head, Myosin_tail, M, Myosin_N

Protein Pathways:

Tight junction, Vascular smooth muscle contraction, Viral myocarditis

Gene Summary:

The protein encoded by this gene is a smooth muscle myosin belonging to the myosin heavy chain family. The gene product is a subunit of a hexameric protein that consists of two heavy chain subunits and two pairs of non-identical light chain subunits. It functions as a major contractile protein, converting chemical energy into mechanical energy through the hydrolysis of ATP. The gene encoding a human ortholog of rat NUDE1 is transcribed from the reverse strand of this gene, and its 3' end overlaps with that of the latter. The pericentric inversion of chromosome 16 [inv(16)(p13q22)] produces a chimeric transcript that encodes a protein consisting of the first 165 residues from the N terminus of core-binding factor beta in a fusion with the C-terminal portion of the smooth muscle myosin heavy chain. This chromosomal rearrangement is associated with acute myeloid leukemia of the M4Eo subtype. Alternative splicing generates isoforms that are differentially expressed, with ratios changing during muscle cell maturation. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (SM2A) lacks an in-frame segment of the coding region, compared to variant SM2B. It encodes a shorter isoform (SM2A), that is missing an internal segment compared to isoform SM2B.