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# smooth muscle Myosin heavy chain 11 Rabbit pAb

Catalog # AP99293

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | P35749 |
| **Other Accession** | P35749 |
| **Reactivity** | Mouse |
| **Predicted** | Rat, Human |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 227339 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human smooth muscle Myosin heavy chain 11 |
| **Epitope Specificity** | 1910-1972/1972 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SIMILARITY** | Contains 1 IQ domain. Contains 1 myosin head-like domain. |
| **SUBUNIT** | Muscle myosin is a hexameric protein that consists of 2 heavy chain subunits (MHC), 2 alkali light chain subunits (MLC) and 2 regulatory light chain subunits (MLC-2). |
| **DISEASE** | Note=A chromosomal aberration involving MYH11 is found in acute myeloid leukemia of M4EO subtype. Pericentric inversion inv(16)(p13;q22). The inversion produces a fusion protein consisting of the 165 N-terminal residues of CBF-beta (PEPB2) and the tail region of MYH11. Familial aortic aneurysm thoracic 4 (AAT4) [MIM:132900]: A disease characterized by permanent dilation of the thoracic aorta usually due to degenerative changes in the aortic wall. It is primarily associated with a characteristic histologic appearance known as 'medial necrosis' or 'Erdheim cystic medial necrosis' in which there is degeneration and fragmentation of elastic fibers, loss of smooth muscle cells, and an accumulation of basophilic ground substance. Note=The disease is caused by mutations affecting the gene represented in this entry. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | 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. MYH11 is a smooth muscle myosin belonging to the myosin heavy chain family. It 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.

## Additional Information

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| **Gene ID** | 4629 |
| **Other Names** | AAT4; FAA4; SMHC; SMMHC; SMMS-1; VSCM2; SM1; SM2; MYH11_HUMAN; MYH11; Myosin heavy chain 11; Myosin heavy chain, smooth muscle isoform; KIAA0866; MYH11_MOUSE; MYH11_RABIT; MYH11_RAT; myosin, heavy polypeptide 11, smooth muscle |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | MYH11 |
| **Synonyms** | KIAA0866 |
| **Function** | Muscle contraction. |
| **Cellular Location** | Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV. Thick filaments of the myofibrils |
| **Tissue Location** | Smooth muscle; expressed in the umbilical artery, bladder, esophagus and trachea. Isoform 1 is mostly found in slowly contracting tonic muscles. |

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