

Recombinant Human MYO1A

Cat. No. MYO1A-30273TH Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant fragment of Human MYO1A with N-terminal proprietary tag. Predicted MW 36.63kDa.

Species Human

Source Wheat Germ

ProteinLength 100 amino acids

Description

The protein encoded by this gene belongs to the myosin superfamily. Myosins are molecular motors that, upon interaction with actin filaments, utilize energy from ATP hydrolysis to generate mechanical force. Each myosin has a conserved N-terminal motor domain that contains both ATP-binding and actin-binding sequences. Following the motor domain is a light-chain-binding neck region containing 1-6 copies of a repeat element, the IQ motif, that serves as a binding site for calmodulin or other members of the EF-hand superfamily of calcium-binding proteins. At the C-terminus, each myosin class has a distinct tail domain that serves in dimerization, membrane binding, protein binding, and/or enzymatic activities and targets each myosin to its particular subcellular location. The kidney epithelial cell line, LLC-PK1-CL4 (CL4), forms a well ordered brush border (BB) on its apical surface. Experiments indicate that the brush border population of the encoded protein turns over rapidly, while its head and tail domains interact transiently with the core actin and plasma membrane, respectively. A rapidly exchanging pool of the protein encoded by this gene envelops an actin core bundle that, by comparison, is static in structure.

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Molecular Weight	36.630kDa inclusive of tags
Form	Liquid
Purity	Proprietary Purification
Storage buffer	pH: 8.00 Constituents: 0.79% Tris HCl, 0.3% Glutathione
Storage	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequences of amino acids	SVTSLKDGLFSLHLSEMSSVSGKGDFFLLVSEHVIELLTKMYRAVL DATQRQLTVTVTE KFSVRFKENSVAVKVVQGPAGGDN SKLRYKKKGSHCLEVTVQ
Sequence Similarities	Contains 3 IQ domains. Contains 1 myosin head-like domain.

GENE INFORMATION

Gene Name	MYO1A myosin IA [Homo sapiens]
Official Symbol	MYO1A
Synonyms	MYO1A; myosin IA; DFNA48, MYHL; myosin-Ia;
Gene ID	4640
mRNA Refseq	NM_005379
Protein Refseq	NP_005370
MIM	601478

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Uniprot ID	Q9UBC5
Chromosome Location	12q13-q15
Function	ATP binding; actin binding; calmodulin binding; motor activity; nucleotide binding;

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