

## Active Recombinant Human MYO3A, GST-tagged

**Cat. No.** MYO3A-90H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human MYO3alpha (1-434) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>           | Sf9 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>ProteinLength</b>    | 1-434 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description</b>      | MYO3alpha belongs to the myosin superfamily which are members of the large myosin superfamily and are categorized into conventional myosins (class II) and unconventional myosins (classes I and III through XV) based on their variable C-terminal cargo-binding domains. Class III myosins, such as MYO3alpha, have a kinase domain N-terminal to the conserved N-terminal motor domains and are expressed in photoreceptors. MYO3alpha plays an important role in hearing in humans and mutations in the MYO3alpha have been shown to cause nonsyndromic progressive hearing loss. MYO3alpha is highly expressed in retina and cochlea. |
| <b>Form</b>             | 50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Bio-activity</b>     | 4 nmol/min/mg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Molecular Mass</b>   | ~76 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>        | >85% by densitometry                                                                                                                                                                                                                    |
| <b>Applications</b>  | Kinase Assay, Western Blot                                                                                                                                                                                                              |
| <b>Storage</b>       | Store product at –70oC. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. |
| <b>Concentration</b> | 0.1 ug/ul                                                                                                                                                                                                                               |

## GENE INFORMATION

|                            |                                                                                     |
|----------------------------|-------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | MYO3A myosin IIIA [ Homo sapiens ]                                                  |
| <b>Official Symbol</b>     | MYO3A                                                                               |
| <b>Synonyms</b>            | MYO3A; myosin IIIA; deafness, autosomal recessive 30 , DFNB30; myosin-IIIa; DFNB30; |
| <b>Gene ID</b>             | 53904                                                                               |
| <b>mRNA Refseq</b>         | NM_017433                                                                           |
| <b>Protein Refseq</b>      | NP_059129                                                                           |
| <b>MIM</b>                 | 606808                                                                              |
| <b>UniProt ID</b>          | Q8NEV4                                                                              |
| <b>Chromosome Location</b> | 10p11.1                                                                             |

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**Function**

ADP binding; ATP binding; actin binding; actin-dependent ATPase activity; calmodulin binding; microfilament motor activity; microfilament motor activity; nucleotide binding; plus-end directed microfilament motor activity; protein kinase activity; protein serine/threonine kinase activity;

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