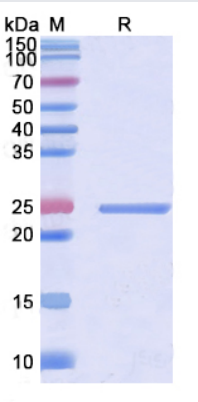
CDH23 Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	CDH23, Recombinant Protein
Full Product Name	Recombinant Human CDH23, N-His
Product Gene Name	CDH23 recombinant protein
Product Synonym Names	Cadherin-23; Otocadherin; KIAA1774; CDH23; KIAA1812
Host	E coli
Form/Format	Lyophilized from a solution in PBS pH7.4, 0.02% NLS, 1mM EDTA, 4% Trehalose, 1% Mannitol.
Purity/Purification	>90% as determined by SDS-PAGE
Preparation and Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 degree C for one week. Store at -20 to -80 degree C for twelve months from the date of receipt.
Molecular Weight	369,494 Da
Sequence Positions	His34-Phe236
Chromosome Location	Chromosome: 10; NC_000010.10 (73156691..73575704). Location: 10q22.1
OMIM	276900
3D Structure	ModBase 3D Structure for Q9H251
Species	Human
Reconstitution	Reconstitute in sterile water for a stock solution.
Product Categories/Family for CDH23 recombinant protein	Recombinant Proteins
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for CDH23 recombinant protein	SDS-PAGE (SDS), Western Blot (WB), ELISA (EIA), Immunogen
Related Product Information for CDH23 recombinant protein	MBS1575701 is a recombinant protein targeting CDH23. Also known as Recombinant Human CDH23, N-His. Host: E coli.
Other Notes	Small volumes of CDH23 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



SDS-Page of CDH23 recombinant protein
SDS PAGE for recombinant Human CDH23 protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CDH23. It may not necessarily be applicable to this product.

NCBI GI #	284925128
NCBI GeneID	64072
NCBI Accession #	NP_001165401.1
UniProt Primary Accession #	Q9H251
UniProt Secondary Accession #	Q5QGS2; Q5XKN2; Q6UWW1; Q96JL3; Q9H4K9; C4IXS9; F6U049
UniProt Related Accession #	Q9H251
GenBank Nucleotide #	NM_001171930.1
NCBI Official Full Name	cadherin-23 isoform 3
NCBI Official Synonym Full Names	cadherin-related 23
NCBI Official Symbol	CDH23
NCBI Official Synonym Symbols	USH1D; CDHR23
UniProt Protein Name	Cadherin-23
UniProt Synonym Protein Names	Otocadherin
Protein Family	Cadherin
UniProt Gene Name	CDH23
UniProt Synonym Gene Names	KIAA1774; KIAA1812
UniProt Entry Name	CAD23_HUMAN
NCBI Protein Information	cadherin-23; otocadherin; cadherin-like 23; cadherin-related family member 23
NCBI Summary for CDH23	This gene is a member of the cadherin superfamily, whose genes encode calcium dependent cell-cell adhesion glycoproteins. The encoded protein is thought to be involved in stereocilia organization and hair bundle formation. The gene is located in a region containing the human deafness loci DFNB12 and USH1D. Usher syndrome 1D and nonsyndromic autosomal recessive deafness DFNB12 are caused by allelic mutations of this cadherin-like gene. Upregulation of this gene may also be associated with breast cancer. Alternative splice variants encoding different isoforms have been described. [provided by RefSeq, May 2013]

UniProt Comments for CDH23	CDH23: Cadherins are calcium-dependent cell adhesion proteins. They preferentially interact with themselves in a homophilic manner in connecting cells. CDH23 is required for establishing and/or maintaining the proper organization of the stereocilia bundle of hair cells in the cochlea and the vestibule during late embryonic/early postnatal development. It is part of the functional network formed by USH1C, USH1G, CDH23 and MYO7A that mediates mechanotransduction in cochlear hair cells. Required for normal hearing. Defects in CDH23 are the cause of Usher syndrome type 1D (USH1D). USH is a genetically heterogeneous condition characterized by the association of retinitis pigmentosa and sensorineural deafness. Age at onset and differences in auditory and vestibular function distinguish Usher syndrome type 1 (USH1), Usher syndrome type 2 (USH2) and Usher syndrome type 3 (USH3). USH1 is characterized by profound congenital sensorineural deafness, absent vestibular function and prepubertal onset of progressive retinitis pigmentosa leading to blindness. Defects in CDH23 are a cause of Usher syndrome type 1D/F (USH1DF). USH1DF patients are heterozygous for mutations in CDH23 and PCDH15, indicating a digenic inheritance pattern. Defects in CDH23 are the cause of deafness autosomal recessive type 12 (DFNB12). DFNB12 is a form of sensorineural hearing loss. Sensorineural deafness results from damage to the neural receptors of the inner ear, the nerve pathways to the brain, or the area of the brain that receives sound information. 8 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Cell adhesion; Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 10q22.1 Cellular Component: stereocilium; membrane; plasma membrane; integral to membrane Molecular Function: protein binding; calcium ion binding Biological Process: cytosolic calcium ion homeostasis; sensory perception of sound; visual perception; sensory perception of light stimulus; calcium ion transport; photoreceptor cell maintenance; response to stimulus; calcium-dependent cell-cell adhesion; homophilic cell adhesion; equilibrioception Disease: Usher Syndrome, Type Id; Deafness, Autosomal Recessive 12
Research Articles on CDH23	**1.** mutations of the CDH23 gene are an important cause of non-syndromic hearing loss.
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