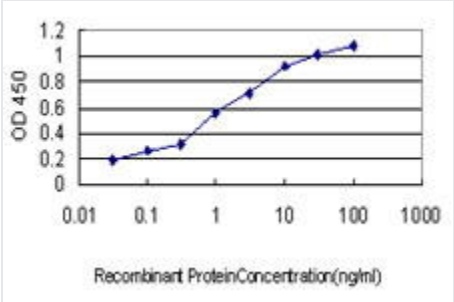
GUCY2D Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	GUCY2D, Monoclonal Antibody
Full Product Name	GUCY2D (Guanylate Cyclase 2D, Membrane (Retina-Specific), CORD5, CORD6, CYGD, GUC1A4, GUC2D, LCA, LCA1, RETGC-1, ROS-GC1, retGC
Product Gene Name	anti-GUCY2D antibody
Product Synonym Names	Guanylate Cyclase 2D; Membrane (Retina-Specific); CORD5; CORD6; CYGD; GUC1A4; GUC2D; LCA; LCA1; RETGC-1; ROS-GC1; retGC
Clonality	Monoclonal
Isotype	IgG
Clone Number	6.0e+9
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with horseradish peroxidase (HRP).
Purity/Purification	Purified
Specificity	Recognizes GUCY2D.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and stor C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in Note: Sodium azide is a potent inhibitor of peroxidase and should not be added to HRP conjugates. For maximum recovery of product, centrifuge the o thawing and prior to removing the cap.
OMIM	gene 601777
3D Structure	ModBase 3D Structure for Q02846
Immunogen	GUCY2D (NP_000171, 521aa-630aa) partial recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	RKVAQGSRSSLGARSMSDIRSGPSQHLDSPNIGVYEGDRVWLKKFPGDQHIAIRPATKTAFSKLQELRHENVALYLGLFLARGAEGPAALWEGNLAVVSE
Conjugate	HRP
Product Categories/Family for anti-GUCY2D antibody	Antibodies; Enzymes; Cyclase
Applications Tested/Suitable for anti-GUCY2D antibody	Western Blot (WB)
Application Notes for anti-GUCY2D antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-GUCY2D antibody	MBS6179697 is an antibody targeting GUCY2D. Also known as GUCY2D (Guanylate Cyclase 2D, Membrane (Retina-Specific), CORD5, CORD6, CYG GUC2D, LCA, LCA1, RETGC-1, ROS-GC1, retGC) (HRP). Host: Mouse.

Other Notes	Small volumes of anti-GUCY2D antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If nec 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 apply.



Testing Data of anti-GUCY2D antibody
Detection limit for recombinant GST tagged GUCY2D is approximately 0.03ng/ml as a capture antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for GUCY2D. It may not necessarily be applicable to this product.

NCBI GI #	4504217
NCBI GeneID	3000
NCBI Accession #	NP_000171
UniProt Primary Accession #	Q02846
UniProt Related Accession #	Q02846
GenBank Nucleotide #	NP_000171.1
NCBI Official Full Name	retinal guanylyl cyclase 1
NCBI Official Synonym Full Names	guanylate cyclase 2D, retinal
NCBI Official Symbol	GUCY2D
NCBI Official Synonym Symbols	LCA; CG-E; CYGD; LCA1; RCD2; CACD1; CORD5; CORD6; GUC2D; ROSGC; retGC; CSNB1I; GUC1A4; RETGC-1; ROS-GC1
UniProt Protein Name	Retinal guanylyl cyclase 1
UniProt Synonym Protein Names	Guanylate cyclase 2D, retinal; Rod outer segment membrane guanylate cyclase; ROS-GC
Protein Family	Olfactory guanylyl cyclase
UniProt Gene Name	GUCY2D
UniProt Synonym Gene Names	CORD6; GUC1A4; GUC2D; RETGC; RETGC1; RETGC-1; ROS-GC
UniProt Entry Name	GUC2D_HUMAN
NCBI Protein Information	retinal guanylyl cyclase 1
NCBI Summary for GUCY2D	This gene encodes a retina-specific guanylate cyclase, which is a member of the membrane guanylyl cyclase family. Like other membrane guanylyl cyclases, this enzyme has a hydrophobic amino-terminal signal sequence followed by a large extracellular domain, a single membrane spanning domain, a kinase homology domain, and a guanylyl cyclase catalytic domain. In contrast to other membrane guanylyl cyclases, this enzyme is not activated by natriuretic peptides. Mutations in this gene result in Leber congenital amaurosis and cone-rod dystrophy-6 diseases. [provided by RefSeq, Dec 2008]

UniProt Comments for GUCY2D	GUCY2D: Probably plays a specific functional role in the rods and/or cones of photoreceptors. It may be the enzyme involved in the resynthesis of cGMP required for recovery of the dark state after phototransduction. Defects in GUCY2D are the cause of Leber congenital amaurosis type 1 (LCA1). LCA designates a clinically and genetically heterogeneous group of childhood retinal degenerations, generally inherited in an autosomal recessive manner. Affected infants have little or no retinal photoreceptor function as tested by electroretinography. LCA represents the most common genetic cause of congenital visual impairment in infants and children. Defects in GUCY2D are the cause of cone-rod dystrophy type 6 (CORD6). CORDs are inherited retinal dystrophies belonging to the group of pigmentary retinopathies. CORDs are characterized by retinal pigment deposits visible on fundus examination, predominantly in the macular region, and initial loss of cone photoreceptors followed by rod degeneration. This leads to decreased visual acuity and sensitivity in the central visual field, followed by loss of peripheral vision. Severe loss of vision occurs earlier than in retinitis pigmentosa. Belongs to the adenylyl cyclase class-4/guanylyl cyclase family. Protein type: Nucleotide Metabolism - purine; Guanylyl cyclase; Membrane protein, integral; Protein kinase, RGC; Protein kinase, dual-specificity (receptor); EC 4.6.1.2; Lyase; Receptor, misc.; Kinase, protein; RGC group; RGC family Chromosomal Location of Human Ortholog: 17p13.1 Cellular Component: nuclear outer membrane; integral to plasma membrane Molecular Function: guanylate cyclase activity; GTP binding; receptor activity; ATP binding; protein kinase activity Biological Process: rhodopsin mediated signaling; cGMP biosynthetic process; phototransduction, visible light; regulation of rhodopsin mediated signaling; visual perception; receptor guanylyl cyclase signaling pathway; protein amino acid phosphorylation Disease: Leber Congenital Amaurosis 1; Cone-rod Dystrophy 6
Research Articles on GUCY2D	**1.** The five patients with bull's-eye maculopathy along with a negative ERG had differing genotypes. Mutations were found in the CRX gene (2 patients), the ABCA4 gene (1 patient), and the GUCY2D gene (2 patients).
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