

# Anti-Myoglobin [MG-1]

Catalog No.	Description		
AM012-5M	6 ml of Ready-to-Use Antibody for use with BioGenex Super Sensitive <sup>TM</sup> Detection Systems OR equivalent detection system		
AM012-10M	10 ml of Ready-to-Use Antibody in a barcode labeled vial for use with BioGenex Super Sensitive <sup>TM</sup> Detection Systems and i6000 <sup>TM</sup> Automated Staining Systems		
MU012-UC	1 ml of Concentrated Antibody for use with BioGenex Super Sensitive <sup>TM</sup> Detection Systems OR equivalent detection system		
MU012-5UC	0.5 ml of Concentrated Antibody for use with BioGenex Super Sensitive <sup>TM</sup> Detection Systems OR equivalent detection system		
AX012-YCD	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx <sup>®</sup> Elite Staining System, 160 tests		
AX012-50D	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 50 tests		
AX012-4M	Ready-to-Use Antibody in Barcode labeled vial for use on the NanoVIP® Staining System, 50 tests		

Clone	Species	Ig Class
MG-1	Mouse	IgG1

# **Intended Use**

For In Vitro Diagnostic Use. This antibody is designed for the specific localization of Myoglobin in formalin-fixed, paraffinembedded (FFPE) tissue sections. Evaluation must be performed by a qualified pathologist.

# **Summary and Explanation**

Myoglobin functions as a cellular oxygen storage mechanism with some contribution to oxygen transport into the cell. The molecular mass of human myoglobin is 17.8 kD. Myoglobin is present exclusively in striated muscle, with the single exception of chicken gizzard smooth muscle. It is a valuable tool used in distinguishing rhabdomyosarcomas from other soft tissue tumors. After muscle tissue damage such as crush injuries, burns, myocardial infarction and muscle diseases, increased levels of myoglobin are found in the blood and urine.

#### **Storage and Handling**

Store at 2-8°C. Fresh dilutions, if required, should be prepared prior to use and are stable and steady for up to one day at room temperature (20-26°C). Diluted antibody preparations can be refrigerated or frozen for extended shelf life.

# **Principles of the Procedure**

Antigen detection by immunohistochemistry (IHC) is a two-step process wherein the primary antibody binds to the antigen of interest and that binding is detected by a chromogen. The primary antibody may be used in IHC using manual techniques or BioGenex Automated Staining System. Positive and negative controls should always be run simultaneously with all patient specimens.

## **Reagents Provided**

Mouse Monoclonal Antibody Myoglobin is affinity purified and diluted in PBS, pH 7.2, containing 1% BSA and 0.09% sodium azide.

# **Dilution of Primary Antibody**

BioGenex Ready-to-Use antibodies have been optimized for use with the recommended BioGenex Detection System and should not require further dilution.

BioGenex concentrated antibodies must be diluted in accordance with the recommended protocol when used with the recommended BioGenex Detection System.

#### **Recommended Protocol**

Refer to the following table for conditions specifically recommended for this antibody. Refer to the BioGenex website for guidance on specific staining protocols or other requirements.

Parameter	BioGenex Recommendations	
Control Tissue	Muscle tissue as available with Biogenex FB-012M* & FG-012M*	
Recommended Dilution for Concentrated Antibody	1:50-100 in HK156	
Recommended Pretreatment (Manual/i6000)**	EZ-AR2 (HK522-XAK)	
Recommended Pretreatment (Xmatrx & NanoVIP)	EZ-AR2 Elegance (HX032-YCD& HX046- 08XN)	
Antibody Incubation (Manual/i6000)	30-60 min at RT	
Antibody Incubation (Xmatrx & NanoVIP)	30-60 min at 25°C	
Detection System for Manual, Xmatrx, NanoVIP & i6000 systems***	Use BioGenex Two-Step <b>OR</b> One-Step Super Sensitive <sup>™</sup> Polymer-HRP IHC Detection System/DAB; see p. 2 for more information	

<sup>\*</sup>FB: positive control micro chamber slides, FG: positive control microscopic slides. Xmatrx & NanoVIP requires micro chamber

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<sup>\*\*</sup>Pretreatment times will vary based on individual microwave power.

\*\*\*For automation systems (Xmatrx-Elite, NanoVIP & i6000 Diagnostics), refer to the factory protocols provided with the instrument.

Detection System	Two-Step HRP Kit	One-Step HRP Kit	Link &Label Kit	
	QD440-XAKEN		QP300-	
	(1000 Test)	QD630-XAKEN	XAKE	
	QD430-XAKEN	(1000 Test)	(1000	
Manual	(1000 Test)		Test)	
Manuai	QD420-YIKEN		QP900-	
	(500 Test)	QD620-XAKEN	9LE	
	QD400-60KEN	(500 Test)	(500	
	(60 Test)		Test)	
Xmatrx -	QD550-YCDEN	QD610-YADEN	N/A	
Automation	(200 Test)	(200 Test)	N/A	
NanoVIP-	QD551-YCDEN	QD611-YADEN	N/A	
Automation	(100 Test)	(100 Test)		
i6000 -	QD410-YAXEN	QD610-YAXEN	IN/A	
Automation	(200 Test)	(200 Test)		
For more information, visit www.biogenex.com.				

#### **Precautions**

This product contains sodium azide at concentrations of less than 0.1%. Sodium azide is not classified as a hazardous chemical at the product concentrations, but proper handling protocols should be observed. For more information, a Safety Data Sheet (SDS) for sodium azide is available upon request. Dispose of unused reagents according to Local, State and Federal Regulations. Wear suitable Personal Protective Equipment, do not pipette reagents by mouth, and avoid contact of reagents and specimens with skin and mucous membranes. If reagents or specimens come in contact with sensitive area, wash with copious amounts of water.

# **Quality Control**

Refer to BioGenex detection system documents for guidance on general quality control procedures.

# **Troubleshooting**

Refer to the troubleshooting section in the documentation for BioGenex Detection Systems (or equivalent detection systems) for remedial actions on detection system related issues, or contact BioGenex Technical Support Department at 1-800-421-4149 or support@biogenex.com or your local distributor to report unusual staining.

#### **Expected Results**

This antibody stains cytoplasm in positive cells in formalin-fixed, paraffin embedded tissue sections. An example image of a tissue section stained with this antibody can be found on the product page on the BioGenex website. Interpretation of the staining result is solely the responsibility of the user. Experimental results should be confirmed by a medically-established diagnostic product or procedure.

# **Limitations of the Procedure**

Improper tissue handling and processing prior to immunostaining can lead to inconsistent results. Variations in embedding and fixation or the nature of the tissue may lead to variations in results. Endogenous peroxidase activity or pseudo peroxidase activity in erythrocytes and tissue biotin may result in non-specific staining based on the detection system employed. Tissues containing Hepatitis B Surface Antigen (HBsAg) may give false positive with horseradish peroxidase systems. Improper counterstaining and mounting may compromise the interpretation of results.

## **Bibliography**

- 1. Brooks, JJ. Immunohistochemistry of myoglobin. In: Advances in Immunohistochemistry. RA
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- 4. Center for Disease Control. Decontamination of Laboratory Sink Drains to Remove Azide Salts. Center for Disease Control Manual Guide--Safety Management, No. CDC-22, Atlanta, Georgia. April 30, 1976.
- 5. Kiernan JA. Histological and Histochemical Methods: Theory and Practice. New York: Pergamon Press 1981.
- 6. Nadji M, Morales AR. Immunoperoxidase, part 1: the techniques and its pitfall. Lab Med 1983; 14:767-770.
- 7. Omata M, Liew CT, Ashcavai M, Peters Rl. Nonimmunologic binding of horseradish peroxidase to hepatitis B surface antigen. A possible source of error in immunohistochemistry. Am J Clin Pathol. 1980;73(5):626-632.
- U.S. Congress. Clinical Laboratory Improvement Amendments of 1988: Final Rule, 57 FR 7163, February 28, 1992.
- National Institute for Occupational Safety and Health, (NIOSH), Rockville, MD. Explosive azide hazard, Publication No. 78-127, 1976.

2°C 8°C	Temperature Limitation	IVD	In Vitro Diagnostic Medical Device
$\boxtimes$	Use By Date	LOT	Batch Code
NON STERILE	Non-Sterile	[]i	Consult Instructions for Use
EC REP	Representative in the European Community		Manufacturer

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