

Estrogen Receptor (ER) [1D5]

Concentrated and Prediluted Monoclonal Antibody
902-054-082224

BIOCARE
M E D I C A L

Available Product Formats				
Format	Catalog Number	Description	Dilution	Diluent
Concentrate	CM 054 A, C	0.1, 1.0 mL	1:50	Van Gogh Yellow
Predilute	PM 054 AA	6.0 mL	Ready-to-use	N/A
Q Series	ALR 054 G7	7.0 mL	Ready-to-use	N/A

Intended Use:

For Research Use Only. Not for use in diagnostic procedures.

This mouse monoclonal antibody is intended to detect Estrogen Receptor (ER) protein.

Background Information:

Estrogen Receptor (ER) [1D5] is a mouse monoclonal antibody directed against human estrogen receptor protein. ER is a 66 kDa protein that mediates the actions of estrogen in estrogen-responsive tissues. It is a member of a large superfamily of nuclear-hormone receptors that function as ligand-activated transcription factors. The ER gene consists of more than 140 kb of genomic DNA divided into 8 exons. These translate into a protein with six functionally discrete domains labeled A through F. ER [1D5] reacts with the amino-terminal domain in the A/B region of ER-alpha. This clone has been established to work in formalin-fixed, paraffin-embedded tissues and has been published in numerous breast cancer research studies.⁵⁻⁸

Known Applications:

Immunohistochemistry (Formalin-fixed paraffin-embedded tissues). Other applications have not been tested.

Supplied As:

Buffered saline solution, pH 5.9-7.4, containing a protein carrier and less than 0.1% sodium azide preservative. See Safety Data Sheet for additional details.

Materials and Methods:

Reagents Provided:

Host Source: Mouse monoclonal

Species Reactivity: Human; other species not tested.

Clone: 1D5

Isotype: IgG1/kappa

Protein Concentration: Contact Biocare's Technical Support

Specificity: Estrogen Receptor Protein

Reconstitution, Mixing, Dilution, and Titration:

Prediluted antibody reagent is optimally diluted for use with above listed staining systems. Further dilution may result in loss of antigen staining. The user must validate any such change. Differences in tissue processing and technical procedures in the user's laboratory may produce significant variability in results necessitating regular performance of in-house controls. Concentrated reagent requires dilution as indicated in table above.

Storage and Stability:

Store at 2°C to 8°C. The product is stable to the expiration date printed on the vial label when stored under these conditions. Do not use after expiration date. Storage under any condition other than those specified must be verified. Diluted reagents should be used promptly; store any remaining reagent at 2°C to 8°C. The stability of user diluted reagent has not been established by Biocare.

Staining Protocol Recommendations (intelliPATH FLX® and manual use):

Below are programming and protocol recommendations to assist the user when staining manually and/or using Biocare's intelliPATH FLX Automated Staining Platform for research applications. The user is responsible for further optimizations of the protocol.

Peroxide Block: Block for 5 minutes with a peroxide blocking reagent.

Pretreatment: Perform heat retrieval if applicable. When using automated equipment, refer to the equipment operator's manual for specific equipment use instructions.

Protein Block (Optional): Incubate for 5-10 minutes at RT with a protein blocking reagent.

Primary Antibody: Incubate for 30 minutes at RT.

Probe: Incubate for 10 minutes at RT with a secondary polymer.

Polymer: Incubate for 10-20 minutes at RT with a tertiary polymer.

Chromogen: Incubate for 5-7 minutes at RT with desired chromogen.

Counterstain: Counterstain with hematoxylin. Rinse with deionized water. Apply Bluing Solution for 1 minute. Rinse with deionized water.

Technical Note:

This antibody, for intelliPATH FLX and manual use, has been standardized with MACH 4 detection system. Use TBS for washing steps.

Staining Protocol Recommendations (Q Series):

ALR054 is compatible with the Leica IHC staining platforms for research applications. Refer to the User Manual for specific instructions for use in optimizing protocols.

Limitations:

This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

Precautions:

1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN₃) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976)¹

2. Handle materials of human or animal origin as potentially biohazardous and dispose of such materials with proper precautions. In the event of exposure, follow the health directives of the responsible authorities where used.^{2,3}

3. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water.⁴

4. Microbial contamination of reagents may result in an increase in nonspecific staining.

5. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.

6. Do not use reagent after the expiration date printed on the vial.

7. Follow local and/or state authority requirements for method of disposal.

8. The SDS is available upon request and is located at <http://biocare.net>.

Technical Support:

Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

References:



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1. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."
2. Occupational Safety and Health Standards: Occupational exposure to hazardous chemicals in laboratories. (29 CFR Part 1910.1450). Fed. Register.
3. Directive 2000/54/EC of the European Parliament and Council of 18 September 2000 on the protection of workers from risks related to exposure to biological agents at work.
4. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.
5. Paeck K, et al. Differential ligand activation of estrogen receptors ERalpha and ERbeta at AP1 sites. Science. 1997 Sep; 277(5331):1508-10.
6. Brock JE, et al. A comparison of estrogen receptor SP1 and 1D5 monoclonal antibodies in routine clinical use reveals similar staining results. Am J Clin Pathol. 2009 Sep; 132(3):396-401.
7. Madeira KP, et al. Comparison of immunohistochemical analysis with estrogen receptor SP1 and 1D5 monoclonal antibodies in breast cancer. Pathol Res Pract. 2012 Nov; 208(11):657-61.
8. Nadji M, et al. Immunohistochemistry of estrogen and progesterone receptors reconsidered: experience with 5,993 breast cancers. Am J Clin Pathol. 2005 Jan; 123(1):21-7.

Q Series antibodies are developed solely by Biocare Medical LLC and do not imply approval or endorsement of Biocare antibodies by Leica Biosystems. Biocare and Leica Biosystems are not affiliated, associated, or related in any way.