MLH-1
Concentrated and Prediluted Monoclonal Antibody
Control Number: 902-220-083117

Catalog Number: ACR 220 AK, BK, CK
Description: 0.1, 0.5, 1.0 ml, concentrated
Dilution: 1:50-1:100
Diluent: Van Gogh Yellow

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

Summary and Explanation:
The G168-15 antibody recognizes human and mouse MLH-1 (80-85 kDa). The repair of
mismatch DNA is essential to maintaining the integrity of genetic information over
time. An alteration of microsatellite repeats is the result of slippage owing to strand
misalignment during DNA replication and is referred to as microsatellite instability
(MSI). These defects in DNA repair pathways have been related to human
carcinogenesis. The importance of mismatch repair genes became apparent with the
identification of the genetic basis for hereditary nonpolyposis colon cancer (HNPC).
MSH-2 is involved in the initial cognition of mismatch nucleotides during the
replication mismatch repair process. It is thought that after MSH-2 binds to a
mismatched DNA duplex it is joined by a heterodimer of MLH-1 and PMSH, which
together help facilitate the later steps in mismatch repair.

Principle of Procedure:
Antigen detection in tissues and cells is a multi-step immunohistochemical process.
The initial step binds the primary antibody to its specific epitope. A secondary antibody
may be applied to bind the primary antibody, followed by an enzyme labeled polymer;
or an enzyme labeled polymer may be applied directly to bind the primary antibody.
The detection of the bound primary antibody is evidenced by an enzyme-mediated
colorimetric reaction.

Source: Mouse monoclonal
Species Reactivity: Human, mouse and rat
Clone: G168-15
Isotype: IgG1/kappa
Total Protein Concentration: ~10 mg/ml. Call for lot specific Ig concentration.
Epitope/Antigen: MLH-1
Cellular Localization: Nuclear
Positive Control: Colon cancer

Known Applications:
Immunohistochemistry (formalin-fixed paraffin-embedded tissues)
Supplied As: Buffer with protein carrier and preservative
Van Gogh Yellow (BRR902)

Storage and Stability:
Store at 2ºC to 8ºC. Do not use after the expiration date printed on the vial.
Never pipette reagents by mouth and avoid contacting the skin and mucous membranes
handled as if capable of transmitting infection and disposed of with proper precautions.

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,
2. 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 in contact with sensitive
   areas, wash with copious amounts of water. (6)
3. Microbial contamination of reagents may result in an increase in nonspecific
   staining.
4. Incubation times or temperatures other than those specified may give erroneous
   results. The user must validate any such change.
5. Do not use reagent after the expiration date printed on the vial.
6. 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:
1. Machin P, et al. Microsatellite instability and immunostaining for MSH-2 and MLH
   -1 in cutaneous and intestinal tumors from patients with the Muir-Torre syndrome. J
   repair genes, p53 mutation, and human papillomavirus infection in Korean oral cancer
3. Menon AG, et al. Down-regulation of HLA-A expression correlates with a better
   Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove
   Azide Salts."
   Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition