**GLUT-1**
Concentrated and Prediluted Monoclonal Antibody
902-408-111017

**Catalog Number:** ACR 408 A, B  
**Description:** 0.1, 0.5 ml, concentrated  
**Dilution:** 1:100  
**Diluent:** Renoir Red  
**APR 408 AA**  
**Description:** 6.0 ml, prediluted  
**Dilution:** Ready-to-use  

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

**Summary and Explanation:**
Glucose transporter 1, also known as GLUT-1 or SLC2A1, is a protein in humans encoded by the SLC2A1 gene. GLUT-1 facilitates the transport of glucose across the plasma membranes of mammalian cells. Studies have shown that GLUT-1 is responsible for the low-level of basal glucose uptake required to sustain respiration in all cells. Several glucose transporter protein isoforms have been identified and shown to function in response to insulin and IGF-1 induced signaling. Immunohistochemical studies have shown GLUT-1 expression in many human tissues including those of the colon, lung, stomach, esophagus and breast (1-10). Studies have shown a high expression of GLUT-1 in cancer has been associated with aggressive behavior and shorter disease-free survival. Hypoxia in cancer has a significant impact on clinical outcome and surrogate markers for tumor hypoxia, such as GLUT-1 and HIF-1 alpha, have shown prognostic significance for patient outcome (2,6). Studies have also shown that GLUT-1 was positive in most mesotheliomas, but was negative for reactive mesothelium (4-7).

**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. After labeling the antigen with a primary antibody, a secondary antibody is added to bind to the primary antibody. An enzyme label is then added to bind to the secondary antibody; this detection of the bound antibody is evidenced by a colorimetric reaction.

**Source:** Mouse monoclonal
**Species Reactivity:** Human; others not tested
**Clone:** SPM498
**Isotype:** IgG1/kappa
**Total Protein Concentration:** ~10 mg/ml. Call for lot specific Ig concentration.
**Epitope/Antigen:** C-terminal human GLUT-1
**Cellular Localization:** Cytoplasmic and membrane

**Positive Tissue Control:** Breast cancer, colon cancer and mesothelioma

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

**Storage and Stability:**
Store at 2ºC to 8ºC. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2ºC to 8ºC. Be sure to discard any reagent that begins to separate (e.g., protein precipitation). Do not use reagent after the expiration date printed on the vial.

**Precautions:**
If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water. Microbial contamination of reagents may result in an increase in nonspecific staining.
**Limitations:**
Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.

**Technical Note:**
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) (11)

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. (12)

3. Micropipettes and 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:**
References Cont’d: