

Sialylated HEG1(SKM9-2) HC**NICHIREI BIOSCIENCES INC.**6-19-20, Tsukiji, Chuo-ku, Tokyo 104-8402, JAPAN
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Size: 1 ml

Code No.: 498331F

Anti-Human Sialylated HEG1 Mouse monoclonal antibody

INTENDED USE

For further manufacturing use only.

SPECIFICATION

This antibody reacts with human sialylated HEG1 protein⁽¹⁾. Sialylated HEG1 is a mucin-like membrane protein with many sialylated O-linked glycans linked to the serine/threonine rich region in the extracellular domain. The antibody recognizes the sialylated⁸⁹³ SKSPSLVSLPT⁹⁰³ sequence in the serine/threonine rich region⁽²⁾. Although the function of sialylated HEG1 has not yet been investigated, it is expressed especially in the cell membrane and cytoplasm of malignant mesothelioma cells. In malignant mesothelioma, expression was found with ~92% sensitivity and ~99% specificity, which is better performance than that provided by other major malignant mesothelioma diagnostic markers⁽¹⁾⁽³⁾⁽⁴⁾. In normal tissues, very low expression of sialylated HEG1 is observed, but a few positive cases may be found in capillary endothelium or reactive mesothelial cells.

REAGENT PROVIDED

Liquid. Concentrate.

Antibody in PBS containing BSA and 0.1% NaN₃

For immunohistochemical staining, use 1:100 -1:200 dilution of this antibody

CLONE AND SOURCE

Clone: SKM9-2

Immunoglobulin Subclass: Mouse IgG1

Immunogen: ACC-MESO4 of Mesothelioma

Source: This antibody is derived from culture supernatant of hybridoma

APPLICATION

This antibody is useful for immunohistochemical staining of human Sialylated HEG1 protein.

USAGE**1. Specimen Pretreatment**

Specimen pretreatment of formalin fixed paraffin embedded tissue sections with heat induced epitope retrieval (HIER) is required.

2. Incubation Conditions for the Antibody

For 30 to 60 minutes at room temperature.

STORAGE AND HANDLING

1. Store at 2-8°C.
2. Confirm expiration date indicated on the labels before use.
3. Adjust this product to room temperature before use.
4. Refrigerate this product promptly after use.

WARNING AND PRECAUTIONS

1. Before using this reagent, please read these instructions.
2. Do not use reagents after the expiration date.
3. Specimens, before and after fixation, and all other materials exposed to them, should be handled like biohazardous materials with proper precautions.
4. Inhalation or ingestion of the highly allergic fixative formaldehyde is harmful. Wear protective mask. If swallowed, induce vomiting. If skin or eye contact occurs, wash thoroughly with water.
5. Organic reagents are flammable. Do not use near open flame.
6. Avoid inhale this product or contact with eyes, mouth, skin and clothing as well.
7. Avoid microbial contamination of reagents as incorrect result may occur.
8. Avoid splashing of reagents or generation of aerosols.
9. Handle this product with attention due to its animal-derived component contained.

10. Sodium azide is a toxic chemical. The concentration in this product is not classified as hazardous, however, accumulated NaN₃ may react with lead/copper plumbing to form explosive metal azides. To prevent such risk, flush the disposed reagent with copious amount of water, or dispose this product properly in accordance with applicable rules and regulations of local and country.

LIMITATION

Tissue staining is dependent on the handling and processing of the tissue prior to staining. Improper fixation, freezing, thawing, washing, drying, heating, or sectioning may produce artifacts or false-negative results. Results will not be optimal if old or unbuffered fixatives are used, or excessively heated during embedding or during attachment of sections to slides. False-positive results may be seen due to nonspecific binding of proteins. The use of blocking reagent separately, in some cases the application of blocking reagent containing an irrelevant protein, prior to incubation with the primary antibody, may be useful for reducing the background. The optimal concentration and incubation time of primary antibodies should be determined by manufacturer. In some cases, further dilution of primary antibodies may be required to prevent over-staining, especially in frozen tissue sections.

REFERENCES

- (1) Tsuji S, et al. HEG1 is a novel mucin-like membrane protein that serves as a diagnostic and therapeutic target for malignant mesothelioma. *Sci Rep.* 2017 Mar 31;7:45768.
- (2) Matsuura R, et al. Identification of mesothelioma-specific sialylated epitope recognized with monoclonal antibody SKM9-2 in a mucin-like membrane protein HEG1. *Sci Rep.* 2018 Sep 24;8(1):14251.
- (3) Hiroshima K, et al. HEG1, BAP1, and MTAP are useful in cytologic diagnosis of malignant mesothelioma with effusion. *Diagn Cytopathol.* 2020 May 22.
- (4) Naso JR, et al. HEG1 Is a Highly Specific and Sensitive Marker of Epithelioid Malignant Mesothelioma. *Am J Surg Pathol.* 2020 Aug;44(8):1143-1148.