

Code No. 10076

Anti-Tight Junction-Associated Protein (7H6) Mouse IgM MoAb**Volume** :500µg

Introduction : Tight junctions function to maintain cellular polarity and permeability barriers in epithelial and endothelial cells. Recently, several component molecules of tight junction have been identified. This monoclonal antibody, 7H6 which reacts with a novel 155 kD tight junction-associated protein in rat livers. The 7H6 antigen is considered as an important molecule for regulation of the barrier function of tight junctions from examination in Madin-Darby canine kidney (MDCK) cells.

Expression of the 7H6 antigen was also examined during rat hepatocarcinogenesis and human cancer tissues. Semiquantitative analysis by confocal laser scanning microscopy revealed that the expression of 7H6 antigen decreased sequentially in preneoplastic lesions and cancer tissues appeared in the liver during hepatocarcinogenesis. The 7H6 antigen was expressed scarcely in HCC with a trabecular pattern, whereas it was expressed intensely at the apical and basolateral membrane of cancer cells with glandular pattern.

Examination of human gastric and colon cancer tissues showed that tight junctions were maintained highly in the well-differentiated (gland-forming) adenocarcinomas, but reduced in expression in the poorly-differentiated adenocarcinomas. These indicate that impairment of tight junctions may be associated with malignant phenotypes of cancer cells, such as the loss of cellular polarity and adhesiveness.

Antigen : A bile canaliculus-rich fraction prepared from rat livers

Source : Mouse-Mouse hybridoma (NS-1 myeloma cells×BALB/c mouse spleen cells)

Clone : 7H6

Subclass : IgM

Purification : Affinity Purified with mouse IgM

Form : Lyophilized product from 1% BSA in PBS containing 0.05%NaN₃

How to use : 1 ml distilled water will be added to the product

Stability : Lyophilized product, 5 years at 2 – 8 °C
: Solution, 2 years at –20 °C

Application : This antibody can be used for immunohistochemistry (Frozen Section) in concentration of 5~20µg/ml, and also can be used for western blotting in concentration of 0.5~10µg/ml.

Specificity : Cross reacts with rat and chicken

Reference : 1. Zhong Y., Saito T., Minase T., Sawada N., Enomoto K., and Mori, M. Monoclonal antibody 7H6 reacts with a novel tight junction-associated protein distinct from ZO-1, cingulin and ZO-2. *J. Cell Biol.* 120 (2): 477-483, 1993.
2. Zhong Y., Enomoto K., Isomura H., Sawada N., Minase T., Oyamada M., Konishi Y., and Mori M. Localization of the 7H6 antigen at tight junctions correlates with the paracellular barrier function of MDCK cells. *Exp. Cell Res.* 214: 614-620, 1994

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