Product Data Sheet

anti-human Claudin 6 monoclonal antibody

Product information

Catalog Number:	GM-1110
Clone:	WU-9E1
Description:	purified monoclonal rat antibody
Specificity:	anti-human Claudin 6
Isotype:	IgG2b
Purification:	Protein G
Storage:	short term: 2°C - 8°C; long term: -20°C (avoid repeated freezing and thawing)
Buffer:	phosphate buffered saline, pH 7.2
Immunogen:	genetic immunisation with cDNA encoding human Claudin 6
Selection:	based on recognition of the complete **native protein** expressed on transfected mammalian cells

Working dilutions

Flow cytometry:	1.2 µg/10^6 cells
ELISA:	1:200 - 1:400
CELISA:	1:200 - 1:400

For each application a titration should be performed to determine the optimal concentration.

Specificity testing by flow cytometry

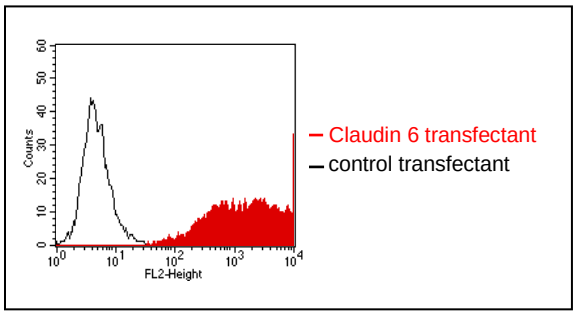

Fig.1: GM-1110. BOSC23 cells were transiently transfected with an expression vector encoding either Claudin 6 (red curve) or an irrelevant protein (control transfectant). Binding of WU-9E1 was detected with a PE conjugated secondary antibody. A positive signal was obtained only with Claudin 6 transfected cells.

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CGE analysis of WU-9E1

The antibody was purified by protein G affinity chromatography from cell culture supernatants and verified by CGE (Fig.2).

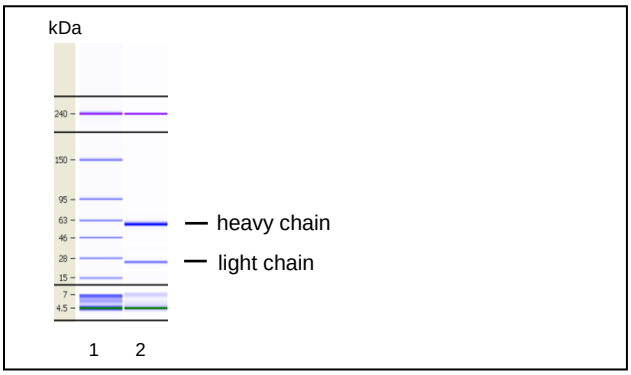

Fig.2: CGE analysis of purified WU-9E1 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 µg of WU-9E1 antibody. Proteins were separated by CGE (capillary gel electrophoresis, Agilent 2100 Bioanalyzer). Internal control bands (240 kDa / 7 kDa / 4,5 kDa).

Background

Claudin 6 belongs to the claudin family which constitutes a large group of four-transmembrane domain proteins (1,2). Claudins are integral tight junction proteins that are responsible for maintaining the integrity of epithelial cell architecture, the control of paracellular transport and cell polarity. The expression pattern of claudins is tissue specific, most tissues express multiple claudins, which can interact in both homotypic and heterotypic fashion to form the tight junction strands (2). Several claudin proteins have been shown to be abnormally expressed in cancers. The differential expression of these proteins between tumour and normal cells, in addition to their membrane localisation, makes them prime candidates for cancer therapy (3).
Members of the claudin family, including Claudin 6 are expressed in the liver and play a critical role in Hepatitis C Infection. They function as coreceptors in HCV entry and assume a role in HCV dissemination, replication and pathogenesis (4,5).

References

1. **Turksen K, Troy TC (2001).** Claudin-6: a novel tight junction molecule is developmentally regulated in mouse embryonic epithelium. *Dev Dyn*.222(2):292-300.
2. **Kazumasa M, Mikio F, Kazushi F, Shoichiro T (1999).** Claudin multigene family encoding four-transmembrane domain protein components of tight junction strands. *Proc Natl Acad Sci U S A.* 19; 96(2): 511–516.
3. **Morin PJ (2005).** Claudin proteins in human cancer: promising new targets for diagnosis and therapy. *Cancer Res*. 1;65(21):9603-6.
4. Zheng A, Yuan F, Li Y, Zhu F, Hou P, Li J, Song X, Ding M, Deng H (2007). Claudin-6 and claudin-9 function as additional coreceptors for hepatitis C virus. *J Virol.* 81(22):12465-71.
5. **Fofana I, Zona L, Thumann C, Heydmann L, Durand SC, Lupberger J, Blum HE, Pessaux P, Gondeau C, Reynolds GM, McKeating JA, Grunert F, Thompson J, Zeisel MB, Baumert TF (2013).** Functional analysis of claudin-6 and claudin-9 as entry factors for hepatitis C virus infection of human hepatocytes by using monoclonal antibodies. *J Virol.* 87(18):10405-10

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