PRODUCT DATA SHEET
ANTI-HUMAN CLAUDIN 6 AND CLAUDIN 9 MONOCLONAL ANTIBODY

PRODUCT INFORMATION

Catalog Number:	GM-1112	**Clone:**	YD-9H8
Description:	purified monoclonal rat antibody	**Specificity:**	anti-human Claudin 6 and Claudin 9
Isotype:	IgG2b/kappa	**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 immunization with cDNA encoding human Claudin 9	**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

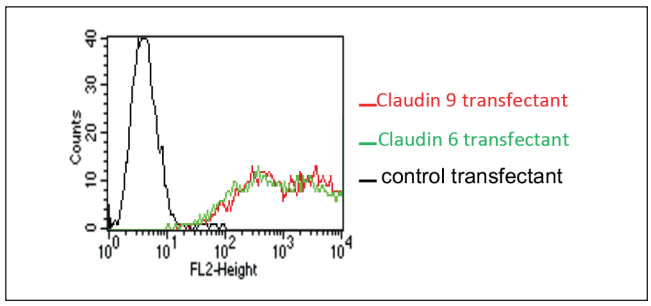

Fig. 1: GM-1111. BOSC23 cells were transiently transfected with an expression vector encoding either Claudin 9 (red curve), Claudin 6 (green curve) or an irrelevant protein (control transfectant). Binding of YD-9H8 was detected with a PE conjugated secondary antibody. A positive signal was obtained with Claudin 9 and Claudin 6 transfected cells.

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SDS PAGE ANALYSIS OF YD-9H8

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

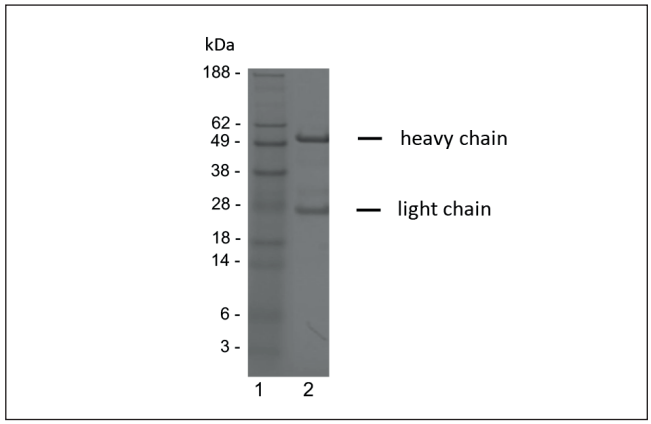

Fig. 2: SDS-PAGE analysis of purified YD-9H8 monoclonal antibody.
Lane 1: molecular weight marker, Lane 2: 2 µg of purified YD-9H8 antibody.
Proteins were separated by SDS-PAGE and stained with RAPID Stain™ Reagent.

BACKGROUND

Claudin 6 and Claudin 9 belong to the claudin family which constitutes a large group of four-transmembrane domain proteins (1). 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 (2).

Members of the claudin family, including Claudin 6 and 9 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 (3).

REFERENCES

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3. ***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.
4. ***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