

PRODUCT DATA SHEET

ANTI-HUMAN CD81 MONOCLONAL ANTIBODY

PRODUCT INFORMATION

Catalog Number:	GM-1113	Clone:	QV-6A8
Description:	purified monoclonal rat antibody	Specificity:	anti-human CD81 (TAPA-1)
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 immunization with cDNA encoding human CD81	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

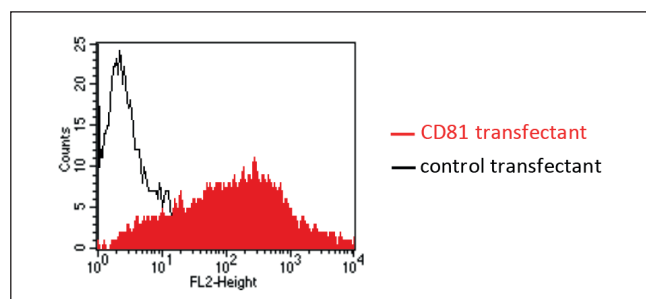


Fig.1: FACS analysis of Dubca cells using QV-6A8-S3 Cat. # GM-1113. Dubca cells were transiently transfected with an expression vector encoding CD81 (red curve). Binding of QV-6A8-S3 was detected with a PE-conjugated secondary antibody. (Isotype control: black curve).

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Genovac GmbH

Waltershofener Str. 17

79111 Freiburg im Breisgau, Germany

catalogue@genovac.com

www.genovac.com

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SDS-PAGE ANALYSIS OF QV-6A8-S3

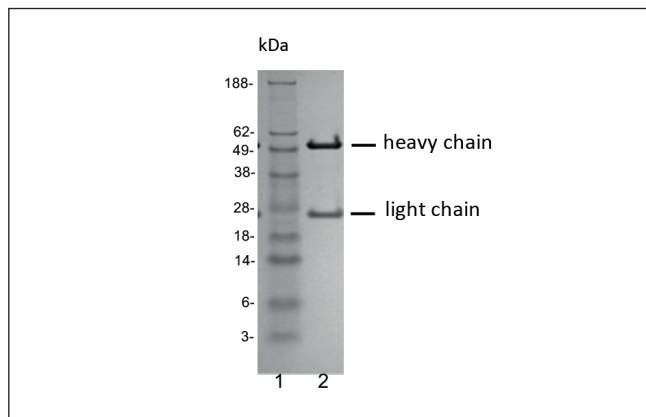


Fig. 2: SDS-PAGE analysis of purified QV-6A8-S3 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 µg of purified QV-6A8-S3 antibody. Proteins were separated by SDS-PAGE and stained with RAPID Stain™ Reagent.

BACKGROUND

CD81 (TAPA-1) belongs to the transmembrane 4 superfamily (tetraspanin family). CD81 is a widely expressed cell-surface protein that is characterized by the presence of four transmembranic domains, short N and C termini, a small extracellular loop (SEL) and a large extra-cellular loop (LEL) (1). It is expressed on cells of hematopoietic, neuroectodermal and mesenchymal origin and plays a role in the regulation of cell development, cell-growth and signal transduction. CD81 plays a critical role in Hepatitis C Infection and is involved in HCV entry due to its ability to interact with virus' E1/E2 glycoproteins (2,3). CD81 is an essential HCV host factor as silencing of CD81 expression by CD81-specific monoclonal antibodies in hepatoma cells inhibits HCV entry (4).

REFERENCES

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2. **Pileri P, Uematsu Y, Campagnoli S, Galli G, Falugi F, Petracca R, Weiner AJ, Houghton M, Rosa D, Grandi G and Abrignana S (1998).** Binding of Hepatitis C Virus to CD81. *Science* 282 no. 5390 pp. 938-941
3. **Flint M, von Hahn T, Zhang J, Farquhar M, Jones CT, Balfe P, Rice CM and McKeating JA (2006).** Diverse CD81 Proteins Support Hepatitis C Virus Infection. *Journal of Virology* p.11331-11342
4. **Fofana I, Xiao F, Thumann C, Turek M, Zona L, Tawar RG, Grunert F, Thompson J, Zeisel MB, Baumert TF (2013).** A Novel Monoclonal Anti-CD81 Antibody Produced by Genetic Immunization Efficiently Inhibits Hepatitis C Virus Cell-Cell Transmission. *PLoS One* 21;8(5):e64221

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