funakoshi
FRONTIERS IN LIFE SCIENCE

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Anti-MUC1, Mouse-Mono (014E) < Anti-Mucin1 >

Catalog NO. FDV-0012A/B

Research use only, not for human or animal therapeutic or diagnostic use.
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Product Background

MUC1 (Mucin-1; also PEM, PEMT and Episialin), a mucin-type glycoprotein, has been associated with cancer progression and metastasis. Initially polypeptide chain of MUC1 is cleaved into two pieces, MUC1-N and MUC1-C (Figure 1). MUC1-N includes cleavage sites and a tandem repeat (TR) domain which has the potential for extensive *O*-glycosylation. On the other hand, MUC1-C has a lot of splicing variants. The most of the commercially available MUC1 antibodies fail in the detection of the MUC1 variants. Clone 014E antibody is raised against common region of MUC1 splicing variants (Figure 1). Clone 014E antibody recognizes most variant forms of MUC1. Recent studies show that clone 014E antibody succeeded in detecting scirrhous gastric cancer (ref. 1, 5) and pancreatic cancer (ref. 4, 5)

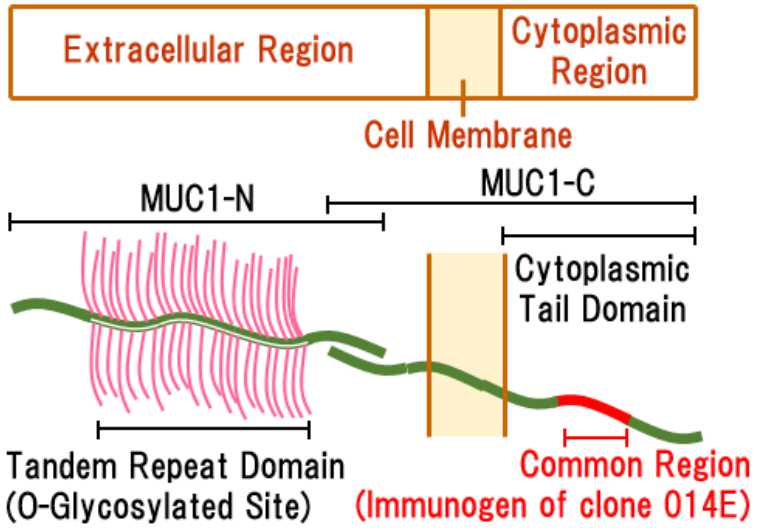


Figure 1 Structure of MUC1 and epitope of clone 014E

Description

Catalog Number: FDV-0012A/B
Size: 25 µL (FDV-0012A), 100 µL (FDV-0012B)
Lot No.: see vial label
Host Species and Clonality: Mouse Monoclonal
Clone name: 014E
Specificity: Human Mucin1/MUC1
Isotype and Subclass: IgG1, kappa
Formulation: Mouse Ascites (Contain 50% Glycerol, Not contain any preservative)
Verified Species Reactivity: Human * Note: Other species not tested.
Immunogen: Synthetic Peptide, corresponding to Common Region in Cytoplasmic Tail Domain (CTD) of Human MUC1 (CRYVPPSSTDRSPYEKVSAG)
Storage: -80°C (Avoid repeated freeze-thaw cycles.)

Application and Recommended usage

- Western blotting 1/2,500-1/5,000
- Immunohistochemistry 1/2,500-1/5,000 (Paraffin)

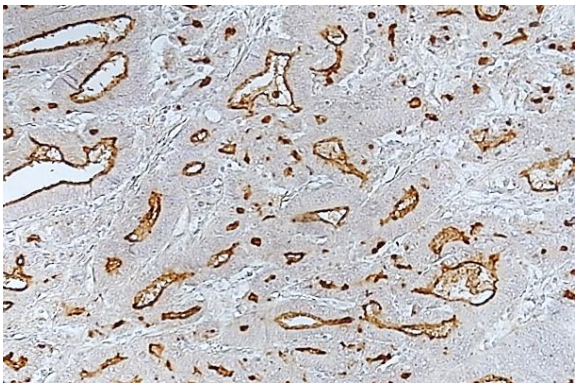
*Optimal working dilutions should be determined experimentally by each laboratory for each application

Reference

1. Yonezawa, *et al., Gastric Cancer*, **15**, 370-381 (2012) A novel anti-MUC1 antibody against the MUC1 cytoplasmic tail domain: use in sensitive identification of poorly differentiated cells in adenocarcinoma of the stomach
2. Yokoyama, *et al., BMC Cancer*, **12**, 67 (2012) The application of methylation specific electrophoresis (MSE) to DNA methylation analysis of the 5' CpG island of mucin in cancer cells
3. Kitamoto, *et al., Oncogene*, 32, 4614-4621 (2013) MUC1 enhances hypoxia-driven angiogenesis through the regulation of multiple proangiogenic factors
4. Yokoyama, *et al., PLOS ONE*, 9, e93760 (2014) Diagnosis of Pancreatic Neoplasms Using a Novel Method of DNA Methylation Analysis of Mucin Expression in Pancreatic Juice

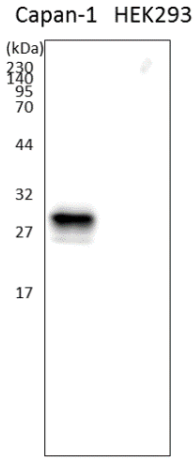
Application Data

Immunohistochemical Staining



Sample: Human stomach cancer (Adenocarcinoma Grade I)
Retrieval method: HIER (pH6.0 / 30 min)
(heat-induced epitope retrieval method)
Dilution: 1:2,500
Detection reagent: ImmPRESS Reagent, Anti-Mouse Ig
(Vector Laboratories, #MP-7402-15)
Chromogen reagent: ImmPACT DAB Peroxidase Substrate
(Vector Laboratories, #SK-4105)

Western Blotting



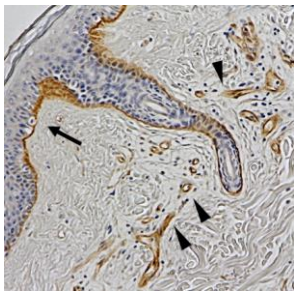
Sample: 5 µg cell lysate in each lane.
Left: Capan-1 (Human pancreatic cancer derived. MUC1 positive)
Right: HEK293 (MUC1 negative)
Dilution: 1:2,500
Secondary antibody: Anti-Mouse IgG, Goat-Poly, HRP
(Kirkegaard & Perry Laboratories, #074-1516)
Chemiluminescence Substrate: SuperSingal West Pico (Pierce)
Detection: GeneGnome (Syngene) with 1min exposure.

Related products

Catalog No.	Product name	Target	Application
FDV-0023	Anti-Laminin α3B, Human, Mouse-Mono (F7)	Laminin α3B	IHC, WB, IP, ELISA
FDV-0024	Anti-Laminin α3A, Human, Mouse-Mono (BG5)	Laminin α3A	IHC, WB, IP, ELISA
FDV-0025	Anti-Laminin γ2 N-terminal fragment, Human, Mouse-Mono (P2H)	Laminin γ2 N-terminal fragment	IHC, WB, ELISA
FDV-0026	Anti-Laminin 511, Human, Mouse-Mono (12D)	Trimeric Lm511 structure	IHC, WB, IP, ELISA

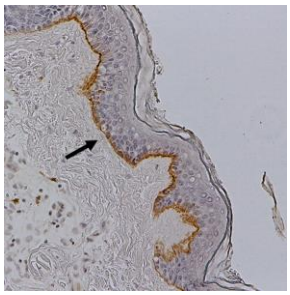
Anti-Laminin α3B (F7) #FDV-0023

Sample : normal human skin
Arrow head : vascular basement membrane
Arrow : epithelial basement membrane



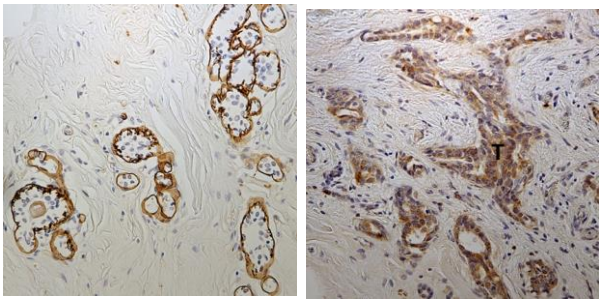
Anti-Laminin α3A (BG5) #FDV-0024

Sample : normal human skin
Arrow : epithelial basement membrane



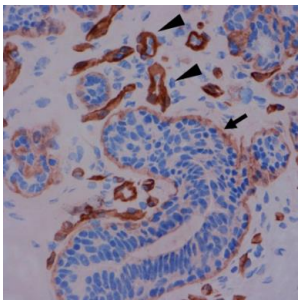
Anti- Laminin γ2 N-terminal fragment (P2H) #FDV-0025

Sample : human normal mammary gland (left),
human breast cancer (right, T=tumor)



Anti-Laminin 511 (12D) #FDV-0026

Sample : human normal mammary gland
Arrow head : vascular basement membrane
Arrow : mammary gland basement membrane



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