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## **MUC-1 Ab-5 (MH1; same as CT2)**

### **Hamster Monoclonal Antibody**

**Cat. #DLN-05909, -05910, or -05908 (0.1ml, 0.5ml, or 1.0ml at 200µg/ml)** (Purified Ab with BSA and Azide)

**Cat. #DLN-05911 or -05912 (0.1ml or 0.2ml at 1.0mg/ml)** (Purified Ab without BSA and Azide)

**Cat. #DLN-05913 (7.0ml)** (Ready-to-Use for Immunohistochemical Staining)

**Description:** Muc1 is a heavily O-glycosylated transmembrane protein expressed on most secretory epithelium, including mammary gland and some hematopoietic cells. It is expressed abundantly in lactating mammary glands and overexpressed in >90% breast carcinomas and metastases. In normal mammary gland it is expressed in apical surface of glandular epithelium. In breast cancer Muc1 is overexpressed; is underglycosylated and the apical localization is lost. Muc1 is transcribed as a larger precursor which is cleaved to form a larger mucin like subunit (265-400kDa) and a smaller subunit (14-28kDa) noncovalently associated with each other. Transgenic Muc1 has been shown to associate with all four erbB receptors and localize with erbB1 (EGFR) in lactating glands<sup>1</sup>. Muc1 can act as a ligand for ICAM-1 on HUVEC cells; it can bind beta-catenin, GSK3beta and it associates with Grb2-SOS upon phosphorylation.

**Comments** Ab-5 is raised in Armenian Hamster (NOT Syrian Hamster) hence, it is advised to use appropriate secondary antibody.

**Mol. Wt. of Antigen:** 14-28kDa

**Epitope:** aa 239-255

**Species Reactivity:** Human and Mouse. Others-not tested.

**Clone Designation:** MH1 (same as CT2)

**Ig Isotype:** IgG

**Immunogen:** A synthetic peptide corresponding to aa 239-255 (SSLSYTNPAVAATSANL) from the cytoplasmic tail of MUC1.

### **Applications and Suggested Dilutions:**

- Flow Cytometry<sup>1</sup>
- Immunofluorescence<sup>1</sup>
- Immunoprecipitation<sup>1</sup>
- Western Blotting<sup>1</sup>
- Immunohistology<sup>1</sup> (formalin/paraffin)  
(Ab 1-2µg/ml for 30 min at RT)

\* (No special pretreatment is required for immunohistochemical staining of formalin/paraffin tissues).

The optimal dilution for a specific application should be determined by the investigator.

**Positive Control:** MCF-7 cells. Breast carcinoma.



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**Cellular Localization:** Cytoplasmic and cell membrane

### **Storage and Stability:**

Ab with sodium azide is stable for 24 months when stored at 2-8°C. Antibody WITHOUT sodium azide is stable for 36 months when stored at below 0°C.

### **Supplied As:**

200µg/ml of antibody purified from ascites fluid by Protein G chromatography. Prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide. Also available without BSA and azide at 1mg/ml or prediluted antibody which is ready-to-use for staining of formalin-fixed, paraffin-embedded tissues.

### **Key References:**

1. Schroeder J A, et al. (2001) J Biol Chem 276:13057-13064.

### **Limitations and Warranty:**

Our products are intended FOR RESEARCH USE ONLY and are not approved for clinical diagnosis, drug use or therapeutic procedures. No products are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our data sheets and website. Our warranty is limited to the actual price paid for the product. Dianova is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

### **Material Safety Data:**

This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbing systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in a large volume of running water to avoid deposits forming in metal drainage pipes.

### **For Research Use Only**

### **Suggested References:**

1. Hilkens J, et al. (1995) Cancer Lett, 90:27-33.
2. Wessling J, et al. (1996) Mol Cell Biol, 7:565-577.
3. Kam J L, et al. (1998) Cancer res 58:5577-5581.
4. Li Y, et al. (1998) Mol Cell Biol, 18:7216-7224.
5. Pandey P, et al. (1995) Cancer Res 55:4000-4003.