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KD-Validated Anti-MUC4 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1237

Specification

KD-Validated Anti-MUC4 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q99102
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 232 kDa; observed, 120 kDa KDa**
Gene Name	**MUC4**
Aliases	**Mucin 4, Cell Surface Associated; Ascites Sialoglycoprotein; MUC-4; ASGP; Pancreatic Adenocarcinoma Mucin; Mucin 4, Tracheobronchial; Tracheobronchial Mucin; Testis Mucin; Mucin-4; HSA276359**
Immunogen	**A synthesized peptide derived from human MUC4**

KD-Validated Anti-MUC4 Rabbit Monoclonal Antibody - Additional Information

Gene ID **4585**

Other Names
Mucin-4, MUC-4, Ascites sialoglycoprotein, ASGP, Pancreatic adenocarcinoma mucin, Testis mucin, Tracheobronchial mucin, Mucin-4 alpha chain, Ascites sialoglycoprotein 1, ASGP-1, Mucin-4 beta chain, Ascites sialoglycoprotein 2, ASGP-2, MUC4

KD-Validated Anti-MUC4 Rabbit Monoclonal Antibody - Protein Information

Name MUC4

Function
Membrane-bound mucin, a family of highly glycosylated proteins that constitute the major component of the mucus, the slimy and viscous secretion covering epithelial surfaces (PubMed:10880978). These glycoproteins play important roles in the protection of the epithelium and are implicated in epithelial renewal and differentiation (PubMed:10880978). Regulates cellular behavior through both anti- adhesive effects on cell-cell and cell-extracellular matrix interactions and its ability to act as an intramembrane ligand for ERBB2. Plays an important role in proliferation and differentiation of epithelial cells by inducing specific phosphorylation of ERBB2. In polarized epithelial cells, segregates ERBB2 and other ERBB receptors and prevents ERBB2 from acting as a coreceptor. The interaction with ERBB2 leads to enhanced expression of CDKN1B. The formation of a MUC4- ERBB2-ERBB3-NRG1 complex leads to down-regulation of CDKN1B, resulting in repression of apoptosis and stimulation of proliferation. Its ability to promote tumor growth may

be mainly due to repression of apoptosis as opposed to proliferation.

Cellular Location
[Mucin-4 beta chain]: Cell membrane; Single-pass membrane protein. Note=Isoforms lacking the Cys-rich region, EGF-like domains and transmembrane region are secreted Secretion occurs by splicing or proteolytic processing [Isoform 3]: Cell membrane; Single-pass membrane protein [Isoform 15]: Secreted

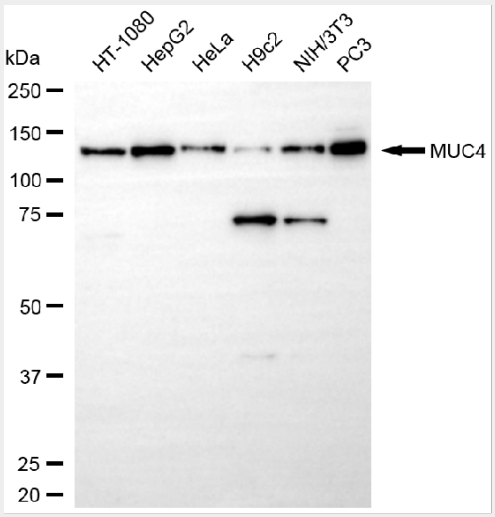
Tissue Location
Expressed in the thymus, thyroid, lung, trachea, esophagus, stomach, small intestine, colon, testis, prostate, ovary, uterus, placenta, and mammary and salivary glands. Expressed in carcinomas arising from some of these epithelia, such as lung cancers, squamous cell carcinomas of the upper aerodigestive tract, mammary carcinomas, biliary tract, colon, and cervix cancers. Minimally or not expressed in the normal pancreas or chronic pancreatitis, but is highly expressed in pancreatic tumors and pancreatic tumor cell lines

KD-Validated Anti-MUC4 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-MUC4 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-MUC4 antibody (Cat#AGI1237). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-MUC4 antibody (Cat#AGI1237, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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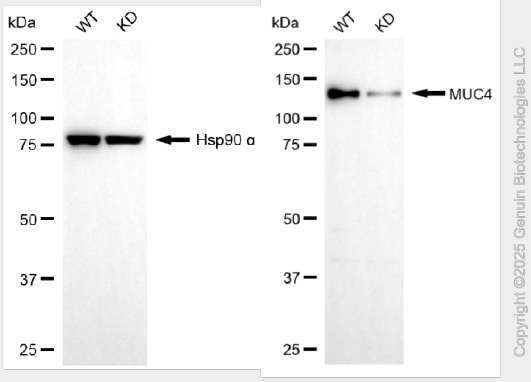
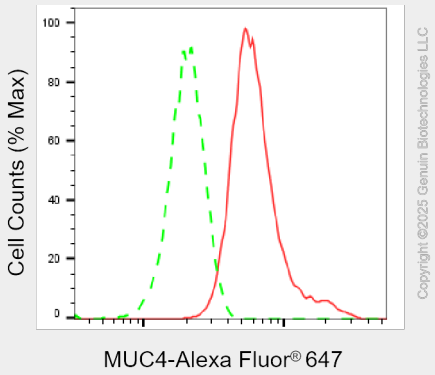
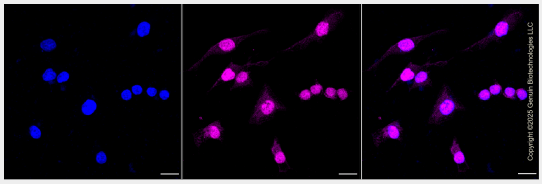


Western blotting analysis using anti-MUC4 antibody (Cat#AGI1237). MUC4 expression in wild-type (WT) and MUC4 knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-MUC4 antibody (Cat#AGI1237, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of MUC4 expression in HeLa cells using MUC4 antibody (Cat#AGI1237, 1:2,000). Green, isotype control; red, MUC4.



Immunocytochemical staining of HeLa cells with anti-MUC4 antibody (Cat#AGI1237, 1:1000). Nuclei were stained blue with DAPI; MUC4 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.