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MUC4(Mucin-4 alpha chain) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20801a

Product Information

Application	WB, E
Primary Accession	Q99102
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB49957
Calculated MW	542307

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
Target/Specificity	This MUC4(Mucin-4 alpha chain) antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 529-560 amino acids from the N-terminal region of human MUC4(Mucin-4 alpha chain).
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MUC4(Mucin-4 alpha chain) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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

Background

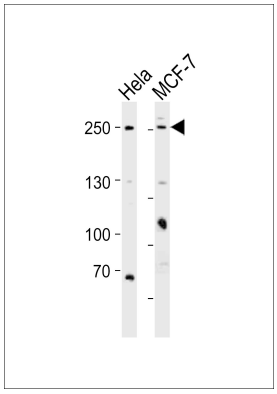
May play a role in tumor progression. Ability to promote tumor growth may be mainly due to repression of apoptosis as opposed to proliferation. Has anti-adhesive properties. Seems to alter cellular behavior through both anti-adhesive effects on cell-cell and cell-extracellular matrix interactions and in its ability to act as an intramembrane ligand for ERBB2. Plays an important role in cell proliferation and differentiation of epithelial cells by inducing specific phosphorylation of ERBB2. The MUC4-ERBB2 complex causes site-specific phosphorylation of the ERBB2 'Tyr-1248'. In polarized epithelilal cells segragates 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.

References

Moniaux N.,et al.Eur. J. Biochem. 267:4536-4544(2000).
Choudhury A.,et al.J. Biochem. 128:233-243(2000).
Desseyn J.-L.,et al.Eur. J. Biochem. 269:3150-3159(2002).
Moniaux N.,et al.Biochem. J. 338:325-333(1999).
Escande F.,et al.Eur. J. Biochem. 269:3637-3644(2002).

Images

Western blot analysis of lysates from Hela, MCF-7 cell line (from left to right), using MUC4(Mucin-4 alpha chain) Antibody (N-term)(Cat. #AP20801a). AP20801a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary



antibody. Lysates at 35ug per lane.