

Product datasheet

Human MUC4 peptide ab88229

Description

Product name	Human MUC4 peptide
Purity	70 - 90% by HPLC.
Animal free	No
Nature	Synthetic
Species	Human

Specifications

Our [Abpromise guarantee](#) covers the use of **ab88229** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Form Liquid

Additional notes

- First try to dissolve a small amount of peptide in either water or buffer. The more charged residues on a peptide, the more soluble it is in aqueous solutions.
- If the peptide doesn't dissolve try an organic solvent e.g. DMSO, then dilute using water or buffer.
- Consider that any solvent used must be compatible with your assay. If a peptide does not dissolve and you need to recover it, lyophilise to remove the solvent.
- Gentle warming and sonication can effectively aid peptide solubilisation. If the solution is cloudy or has gelled the peptide may be in suspension rather than solubilised.
- Peptides containing cysteine are easily oxidised, so should be prepared in solution just prior to use.

Preparation and Storage

Stability and Storage Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Information available upon request.

General Info

Function 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 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.

Tissue specificity

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.

Sequence similarities

Contains 1 AMOP domain.
Contains 2 EGF-like domains.
Contains 1 NIDO domain.
Contains 1 VWFD domain.

Developmental stage

Expressed early in the primitive gut before respiratory and digestive epithelial cells have acquired their tissue and cell specificity. Expressed at the basal surface of the epithelium from week 14 to 26 weeks and then predominantly localized in only parietal cells. Immediately before birth, found in the cytoplasm of the mucous columnar epithelial cells. In the embryo expressed in skin, then disappears late in gestation.

Post-translational modifications

Proteolytically cleaved into 2 chains, mucin-4 alpha chain and mucin-4 beta chain.
mucin-4 alpha chain is highly O-glycosylated.
mucin-4 beta chain is predominantly N-glycosylated.

Cellular localization

Secreted; Cell membrane and Membrane. Secreted. Isoforms lacking the Cys-rich region, EGF-like domains and transmembrane region are secreted. Secretion occurs by splicing or proteolytic processing.

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