

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                  |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human MUC-1 in direct ELISAs and Western blots.                                |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Sheep IgG                                                                   |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                              |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human MUC-1<br>Pro126-Arg145<br>Accession # P15941 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm    |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                           |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                        |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

MUC-1 (Mucin-1; also episialin, MAM-6, PEM and PUM) is a 150-450 kDa type I transmembrane glycoprotein that belongs to the Mucin family of molecules. It forms a protective barrier against microbes on the apical surface of most glandular epithelium, and becomes prominently displayed on tumor cells. Mature human MUC-1 is 1232 amino acids (aa) in length. It contains an 1135 aa extracellular domain (ECD) (aa 24-1158), and a signal transducing 73 aa cytoplasmic tail (aa 1182-1255). The ECD is highly polymorphic as evidenced by a highly variable number of 20 aa O-glycosylated tandem repeats. Intracellular processing cleaves MUC-1 between Gly1097 and Ser1098, generating a noncovalently linked heterodimer that is expressed on the cell surface. The C-terminus is 22-25 kDa in size, while the N-terminus is highly variable (70-400 kDa in size), a function of the number of resident tandem repeats. Cell surface processing by TACE releases a soluble ECD fragment of variable MW. There are multiple splice variants that show massive reductions in the size of the ECD. Over aa 126-145, human MUC-1 shares < 50% aa identity with mouse MUC-1. When compared to human, mouse MUC-1 is found not to be polymorphic and possess poorly conserved tandem repeat sequences.

#### PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.