

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MUC-1 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human MUC-1 Pro126-Arg145 Accession # P15941
Conjugate	Alexa Fluor Plus 594 Excitation Wavelength: 590 nm Emission Wavelength: 618 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

DATA

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	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.

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