Product description

MUC1 is a high molecular weight transmembrane mucin glycoprotein expressed on the apical surface of most glandular and ductal epithelial cells, as well as select hematopoietic lineages. In the majority of human carcinomas, MUC1 expression is upregulated and aberrantly glycosylated, resulting in non-polarized distribution across the cell surface. The SM3 monoclonal antibody specifically recognizes an under-glycosylated form of MUC1, making it tumor-selective. SM3 binds to a core protein epitope defined by the sequence PDTRP and has demonstrated reactivity with breast, colon, ovarian, and other adenocarcinomas. It is suitable for applications including immunohistochemistry (compatible with methacarn-fixed tissues) and immunotargeting strategies.

Name: Anti-MUC1 [SM3]

Species Reactivity: Human

Host Species: Balb/c mouse

Clonality: Monoclonal

Clone: SM3

Isotype: IgG2a kappa

Target: Mucin1 (MUC1)

Immunogen: Hydrogen fluoride de-glycosylated human milk mucin

Conjugate: N/A

Myeloma used: NS2

Applications: ELISA ; FACS ; IHC

Recommended controls: MCF7 cells (FACS) or human breast carcinoma (IHC)

Production details: A monoclonal antibody was generated against partially de-glycosylated human milk mucin. Mucin was purified from human skimmed milk using HMFG-1 affinity chromatography followed by size exclusion chromatography. De-glycosylation was performed using anhydrous hydrogen fluoride to selectively remove O-linked carbohydrates. A female BALB/c mouse was immunized with the partially stripped mucin in Freund's adjuvant, followed by booster doses and a final intravenous injection of extensively de-glycosylated mucin. Splenocytes were harvested and fused with NS2 myeloma cells to produce hybridomas.

Contributor(s)

Inventor: Joyce Taylor-Papadimitriou and Joy Burchell
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Properties

Formulation: 1 mg/mL in PBS with 0.02% azide.

Purification: The antibody was purified by affinity chromatography.

Stability and storage: Product stable at -20°C when stored undiluted. Avoid repeated freeze-thaw cycles.

Directions for use: It is recommended that the antibody be titrated for optimal performance in each application.

References

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Material Citation

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