Datasheet for ABIN7543227

Recombinant anti-MUC1 antibody

Go to Product page

Overview

Quantity:	200 µg
Target:	MUC1
Reactivity:	Human
Host:	Mouse
Antibody Type:	Recombinant Antibody
Clonality:	Monoclonal
Conjugate:	This MUC1 antibody is un-conjugated
Application:	ELISA, Flow Cytometry (FACS), Immunofluorescence (IF), Radioimmunoassay (RIA), Functional Studies (Func)

Product Details

Purpose:	Anti-MUC1 [AR20.5], Mouse IgG1, kappa
Immunogen:	This antibody was raised by immunizing BALB/c mice with MUC1.
Clone:	AR20-5
Isotype:	IgG1 kappa
Specificity:	This antibody is specific for human MUC1. The alpha subunit of MUC1 has cell adhesive properties. Can act both as an adhesion and an anti-adhesion protein. May provide a protective layer on epithelial cells against bacterial and enzyme attack. The beta subunit of MUC-1 contains a C-terminal domain which is involved in cell signaling, through phosphorylations and protein-protein interactions. Modulates signaling in ERK, SRC and NF-kappa-B pathways. In activated T-cells, influences directly or indirectly the Ras/MAPK pathway. Promotes tumor

Product Details

	progression. Regulates TP53-mediated transcription and determines cell fate in the genotoxic stress response. Binds, together with KLF4, the PE21 promoter element of TP53 and represses TP53 activity.
Characteristics:	Original Species of Ab: Mouse Original Format of Ab: IgG
Purification:	Protein A affinity purified

Target Details

Target:	MUC1
Alternative Name:	MUC1 (MUC1 Products)
Background:	Mucin-1, Breast carcinoma-associated antigen DF3, Cancer antigen 15-3, CA 15-3, Carcinoma-associated mucin, Episialin, H23AG, Krebs von den Lungen-6, KL-6, PEMT, Peanut-reactive urinary mucin, PUM, Polymorphic epithelial mucin, PEM, Tumor-associated epithelial membrane antigen, EMA, Tumor-associated mucin, CD227
UniProt:	P15941
Pathways:	Negative Regulation of intrinsic apoptotic Signaling

Application Details

Application Notes:	While creating and characterizing this antibody, an ELISA was preformed on MUC1 and a 23-mer MUC1 peptide, E23 (CPAHGVTSAPDTRPAPGSTAPPA), Furthermore, the specificity of the antibody was confirmed using flow cytometry on MCF-7, BT-20 and 413BCR cell lines using the murine version of this antibody. Further, a chromium release assay was preformed using the murine version of this antibody on ZR75-1 cells. And finally the biodistribution of the mouse version of this antibody was tested. This was done on mice injected with ZR75-1 cancer cells (Qi et al, 2001, pmid:11839249). To assess the ability of this antibody to cure cancer mice inoculated with a Panc02.MUC1 cancer cell line were treated with the mouse version of this antibody. The antibody showed the ability to slow down or even cure cancer in these mice. Further, the MUC1 concentrations in the serum of the mice inoculated with a Panc02.MUC1 were tested with ELISA using the mouse version of this antibody. Then spleen and tumor tissue were tested for the presence of MUC1 in both flow cytometry and immunocytochemistry using the mouse version of this antibody. And finally ADCC activity of the mouse version of this antibody was performed using murine splenic NK cells (Mehla et al, 2017, pmid:29204701). The ability of this antibody to halt cancer progression in humans was assessed using the mouse

Application Details

	version of this antibody. The antibody showed no significant difference in the progression of cancer. But it did show the ability to cause an anti-MUC1 response (de Bono et al, 2004, pmid:15550589). While creating a new PET scan agent to detect MUC1 postive cancers, flow cytometry was preformed on SKOV3, a human ovarian cancer cell line, using the mouse version of this antibody. Further, a radioimmunoassay was preformed on human serum using the mouse version of this antibody bound to 89 zirconium. Finally, a pet scan was preformed on mice inoculated with the SKOV3 ovarian cancer cell line, the cell line was stained using the mouse version of this antibody bound to 89 zirconium (Fung et al, 2020, pmid:32429033).
Comment:	This reformatted mouse antibody was made using the variable domain sequences of the original Mouse IgG format for improved compatibility with existing reagents assays and techniques.
Restrictions:	For Research Use only

Handling

Concentration:	1 mg/mL
Buffer:	PBS with 0.02 % Proclin 300.
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.