

## Anti-MUC1 Rabbit Monoclonal Antibody

Catalog Number: M00187-1

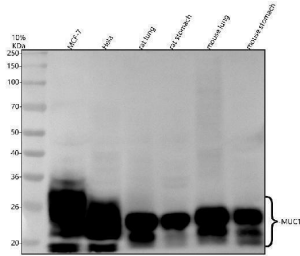
### Overview

Product Name	Anti-MUC1 Rabbit Monoclonal Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-MUC1 Rabbit Monoclonal Antibody catalog # M00187-1. Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IP, IF, IHC, ICC, WB
Clonality	Monoclonal FHA-13
Formulation	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P15941

### Technical Details

Immunogen	A synthesized peptide derived from human MUC1
Isotype	Rabbit IgG
Form	Liquid
Concentration	0.5mg/ml
Purification	Affinity-chromatography
Suggested Dilutions	WB 1:500-2000 IHC 1:50-200 ICC/IF 1:50-200 IP 1:20 FC 1:20

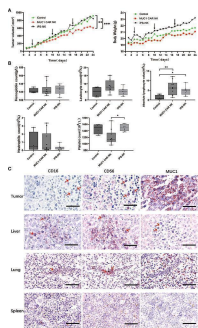
## Anti-MUC1 Rabbit Monoclonal Antibody (M00187-1) Images



Western blot analysis of CA15-3/MUC1 using anti-CA15-3/MUC1 antibody (M00187-1). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human MCF-7 whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: rat lung tissue lysates, Lane 4: rat stomach tissue lysates, Lane 5: mouse lung tissue lysates, Lane 6: mouse stomach tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CA15-3/MUC1 antigen affinity purified monoclonal antibody (M00187-1) at 1: 1000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for CA15-3/MUC1 at approximately 17-30 kDa. The expected band size for CA15-3/MUC1 is at 122 kDa.

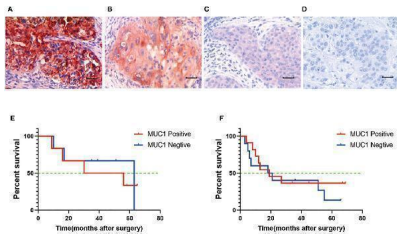
Clinical parameters	genes	MUC1 expression		χ <sup>2</sup>	P-value	
		Positive (%)	Negative (%)			
Gender	MUC1	51	28(148)	22(15.1)	2.55	0.112
	Tumors	32	22(71.9)	40(12.1)		
Age		50	37(73.5)	13(25.5)	5.171	0.024
	Age	47	34(72.3)	13(27.7)		
Depth of invasion (T)		30	22(73.3)	8(26.7)	3.118	0.078
	T<=1.0	4	4(100)	0(0)		
	1.0<T<=2.0	4	3(75)	1(25)		
	T>2.0	26	15(57.7)	11(42.3)	2.09	0.151
	T≤2.0	18	15(83.3)	3(16.7)		
TNM stage		50	34(68)	16(32)	3.590	0.061
	I-II	30	22(73.3)	8(26.7)		

Correlation between the clinical parameters and MUC1 expression in oral tongue squamous cell cancer tissues. Index in PubMed under a CC BY license. PMID: 38390321

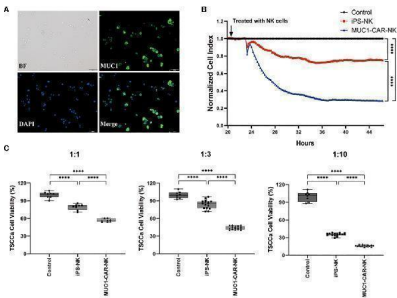


iPSC-derived MUC1-targeted CAR-NK cells restrict tumor growth in OTSCC xenograft mice without causing significant toxic side effects. (A) Tumor volume growth curves of OTSCC xenograft mice treated with iPSC-derived MUC1-targeted CAR-NK cells, iPSC-derived NK cells, and normal saline respectively (A left). Mouse weight changes in different treatment groups (A right). Black arrow represents the time of administration. The difference of each group (n = 10/group) was analyzed by two-way ANOVA and Sidak t test. \*\*P < 0.01, \*\*\*P < 0.001. (B) Blood routine results of OTSCC xenograft mice after treatment with normal saline (n=4), iPSC-derived MUC1-targeted CAR-NK (n=10), iPSC-derived NK cells (n=8). \*P < 0.05, \*\*P < 0.01. One-way ANOVA and Tukey's test. (C) IHC staining with primary antibodies to CD16, CD56 and MUC1 on sections of the tumor, liver, lung and spleen of a representative OTSCC xenograft mouse from the iPSC-derived MUC1-targeted CAR-NK cells treatment group. Scale bar: 50um. Index in PubMed under a CC BY license. PMID: 38390321

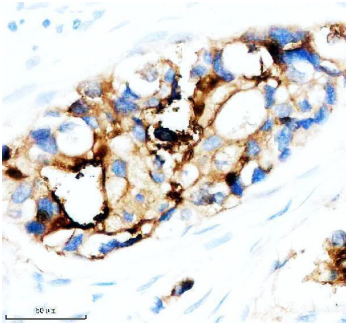
MUC1 expression in human oral tongue squamous cell cancer. (A) Strong positive staining of MUC1. Positive staining of MUC1 was mainly located on the membrane and



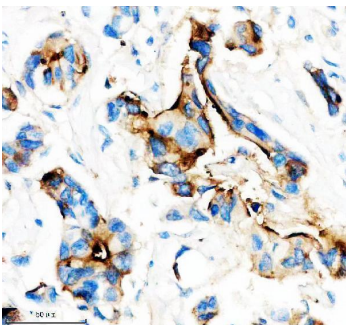
in the cytoplasm of cancer cells. (B) Moderate positive staining of MUC1. (C) Weak positive staining of MUC1. (D) Negative control. Scale bar: 30  $\mu$ m. There was no significant difference of overall survival between MUC1 positive and MUC1 negative OTSCC patients either in stage III ( $P=0.07$ ) (E) or in stage IV ( $P=0.32$ ) (F). Kaplan-Meier method and log-rank test. Index in PubMed under a CC BY license. PMID: 38390321



Efficacy of the iPSC-derived MUC1-targeted CAR-NK cells against the MUC1-expressing human OTSCC cell lines. (A) Immunofluorescence of TSCCa cells. MUC1 positively expressed on TSCCa cell membrane. (B) Time curve of TSCCa cells killed by iPSC-derived MUC1-targeted CAR-NK cells detected by xCELLigence RTCA. Cell viability of TSCCa was calculated by xCELLigence and presented as Cell Index.  $****P < 0.0001$ , One-way ANOVA and Tukey test. (C) The efficiency of iPSC-derived MUC1-targeted CAR-NK cells killing TSCCa cells in different ratio of cell concentration in vitro condition. Experiments were performed at the ratio of target cells to effector cells corresponding to 1:1, 1:3 and 1:10 respectively.  $****P < 0.0001$ , One-way ANOVA and Tukey's test. Index in PubMed under a CC BY license. PMID: 38390321

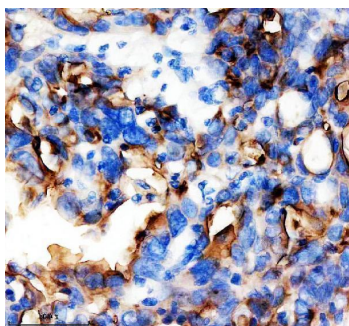


IHC analysis of MUC1 using anti-MUC1 antibody (M00187-1). MUC1 was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-MUC1 Antibody (M00187-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

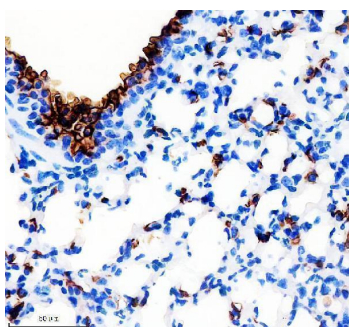


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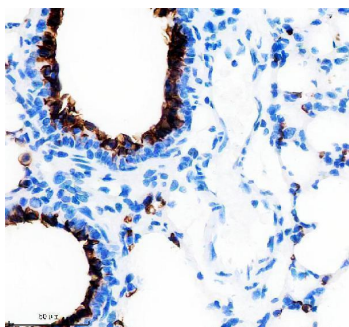
IHC analysis of MUC1 using anti-MUC1 antibody (M00187-1). MUC1 was detected in a paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10%



goat serum. The tissue section was then incubated with 1:50 rabbit anti-MUC1 Antibody (M00187-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of MUC1 using anti-MUC1 antibody (M00187-1). MUC1 was detected in a paraffin-embedded section of mouse lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-MUC1 Antibody (M00187-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of MUC1 using anti-MUC1 antibody (M00187-1). MUC1 was detected in a paraffin-embedded section of rat lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-MUC1 Antibody (M00187-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

## 1 Publications Citing This Product

1. PubMed ID: 27895759, Globose, cystic olfactory ensheathing cell tumor: A case report and literature review

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