LIFE SCIENCE

Xenoantigen and Anti-Xenoantigen Antibodies

Anti-NeuGc Polyclonal Antibodies

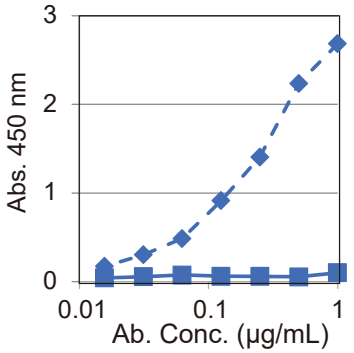
Antibodies capable of detecting Neu5Gc epitope

***N*-Acetylneuraminic Acid (NeuAc) and *N*-Glycolylneuraminic Acid (NeuGc) are the two major forms of sialic acid found in mammals. Humans are unable to synthesize Neu5Gc due to a mutation in the gene encoding the enzyme responsible for Neu5Gc synthesis. Humans naturally possess antibodies against Neu5Gc glycan structures, and this is responsible for the immunogenicity of therapeutic proteins containing Neu5Gc glycan epitopes. Therefore, a method for the detection of Neu5Gc is required.**

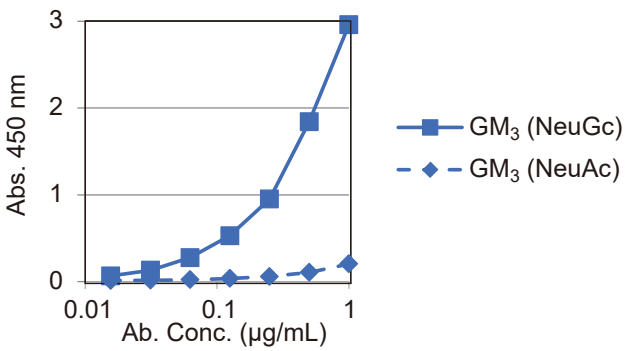
Anti-NeuGc Polyclonal Antibody	0.05mg/1vial	[A3240]
Anti-NeuGc Polyclonal Antibody Biotin Conjugate	0.05mg/1vial	[A3294]
Anti-NeuGc Polyclonal Antibody FITC Conjugate	0.05mg/1vial	[A3295]

Anti-NeuGc Polyclonal Antibody reacts NeuGc but not NeuAc

Anti-GM_3 Monoclonal Antibody [A2582]

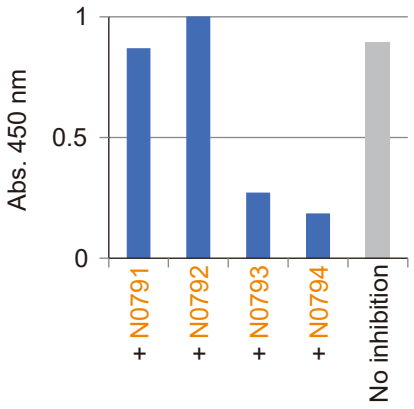


Anti-NeuGc Polyclonal Antibody [A3240]



The glycolipids coating the ELISA plates reacted with these antibodies. These primary antibodies were then detected using appropriate secondary antibodies.

Binding of Anti-NeuGc Antibody is inhibited by NeuGcα(2-3)Gal and NeuGcα(2-6)Gal



ELISA plates were coated with BSM. Anti-NeuGc antibodies and/or inhibitors were incubated in tubes and then made to react with the bound BSM. The primary antibodies were then detected using appropriate secondary antibodies. The inhibitors used are listed below.

Neu5Acα(2-3)Galβ MP Glycoside [N0791]
Neu5Acα(2-6)Galβ MP Glycoside [N0792]
Neu5Gcα(2-3)Galβ MP Glycoside [N0793]
Neu5Gcα(2-6)Galβ MP Glycoside [N0794]

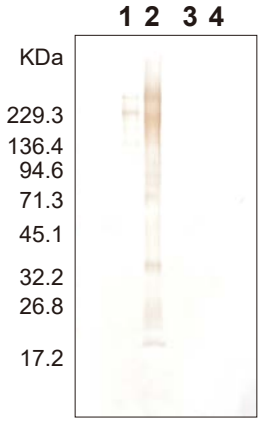
Anti-αGal Antibodies

Antibodies capable of detecting αGal epitope (Galα1-3Gal)

Anti-αGal antibody exists as a natural antibody in humans. Binding of this antibody to αGal antigens (αGal epitope) expressed on porcine xenograft surfaces are a major factor for determining engraft survival. Recently, it has been observed that therapeutic antibodies and cell processing material for reproductive medicine contain the αGal epitope, which indicates the importance of rapid detection of αGal epitope.

Anti-αGal Polyclonal Antibody (Chicken)	0.05mg/1vial	[A3123]
Anti-αGal Polyclonal Antibody Biotin Conjugate	0.05mg/1vial	[A3144]
Anti-αGal Chicken Polyclonal Antibody HRP Conjugate	0.05mg/1vial	[A3195]

Anti-αGal antibody can be utilized for detection of the αGal epitope on glycoproteins



Western blotting analysis performed using an anti-αGal polyclonal antibody biotin conjugate (A3144).

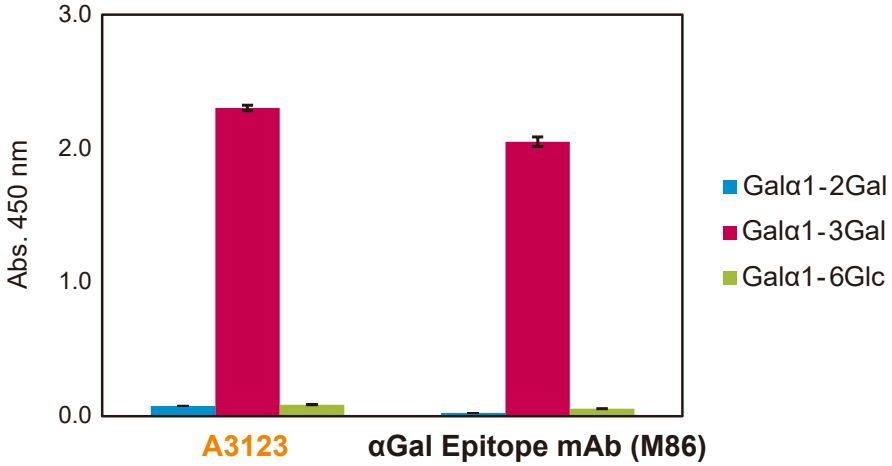
Lane 1: Thyroglobulin, porcine thyroid gland.

Lane 2: Laminin, Engelbreth-Holm-Swarm murine sarcoma basement membrane.

Lane 3: Thyroglobulin treated with α1-3,4,6 galactosidase.

Lane 4: Laminin treated with α1-3,4,6 galactosidase.

Anti-αGal antibody shows the same high specificity compared with an anti-αGal monoclonal antibody



The glyco-conjugates coating the ELISA plates were bound by anti-αGal antibodies.
The anti-αGal primary antibodies were then detected using appropriate secondary antibodies.

Peroxidase Substrates

AzBTS (Ready-to-use solution) [for ELISA]
(= 2,2'-Azinobis(3-ethylbenzothiazoline-6-sulfonic Acid Ammonium Salt) (Ready-to-use solution))

100mL [A3176]

Application

1. Add 100µL of AzBTS solution (Product No. A3176) to each well.
2. Incubate the plate at room temperature for 30 minutes.
3. Within 1 hour from start the reaction, measure the absorbance of each well at 405 nm.

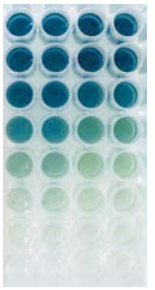


Figure. An example of use by the above method

4-Chloro-1-naphthol (Ready-to-use solution) [for Western blotting]
(= 4-CN (Ready-to-use solution))

100mL [C3384]

Application

1. Incubate a blotting membrane with an HRP-conjugated antibody and then wash the membrane.
2. Incubate the washed membrane with 4-CN solution (Product No. C3384) until color development.
3. Add deionized water to stop color development.

Alkaline Phosphatase Substrates

4-Nitrophenyl Phosphate (Ready-to-use solution) [for ELISA]
(= pNPP (Ready-to-use solution))

100mL [N1109]

Application

1. Add 100µL of pNPP solution (Product No. N1109) to each well.
2. Incubate the plate at room temperature for 30 minutes.
3. To terminate the reaction, add 100 µL of 1N NaOH solution (Product No. S0542) to each well.
4. Within 1 hour from start the reaction, measure the absorbance of each well at 405 nm.

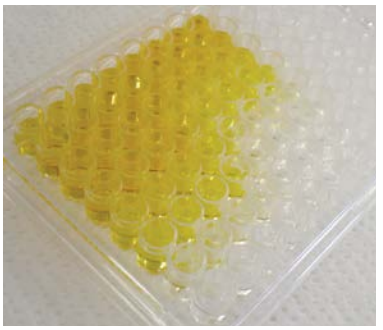


Figure. An example of use by the above method

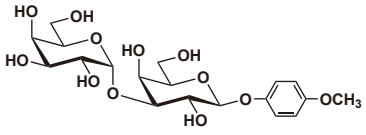
NBT / X-Phosphate *p*-Toluidine Salt Solution (50X) [for Western blotting]

5mL [N1113]

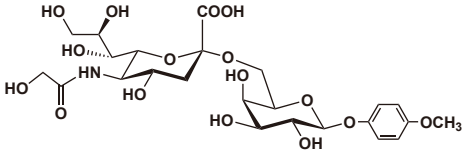
Application

1. Incubate a blotting membrane with an ALP-conjugated antibody and then wash the membrane.
2. Dilute the solution (Product No. N1113) to 1X before use.
3. Incubate the washed membrane with 1X NBT / X-Phosphate *p*-Toluidine Salt solution until color development.
4. Add deionized water to stop color development.

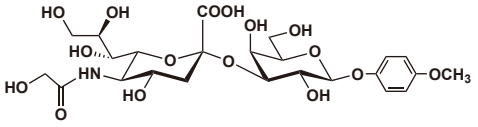
Xenoantigen related Products



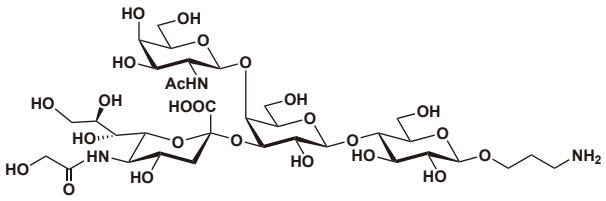
Galα(1-3)Gal-β-MP
[G0461]



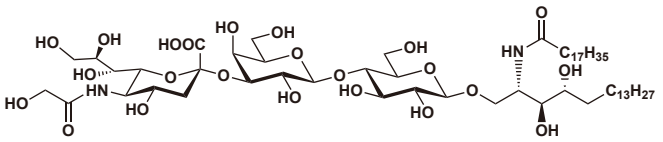
Neu5Gcα(2-6)Galβ MP Glycoside
[N0794]



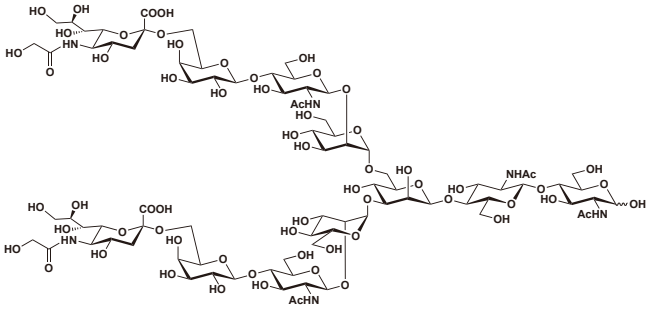
Neu5Gcα(2-3)Galβ MP Glycoside
[N0793]



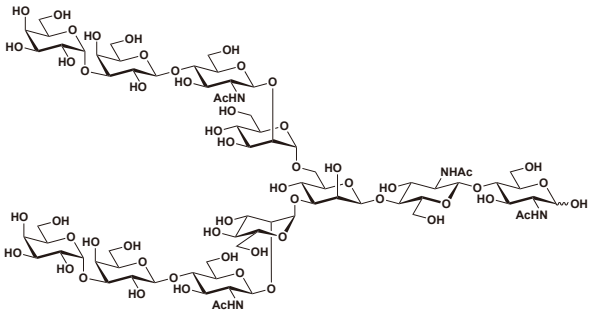
Neu5Gcα(2-3)[GalNAcβ(1-4)]Galβ(1-4)Glc-β-propylamine
[N0971]



Ganglioside GM_3(Neu5Gc) (phyto-type)
[G0510]



Neu5Gcα(2-6) *N*-Glycan
[N1064]



Galα(1-3) *N*-Glycan
[G0488]

Secondary Antibodies and Streptavidins

Anti-Chicken IgY

Sheep Anti-Chicken IgY	1mg/1vial	[S0998]
Sheep Anti-Chicken IgY Biotin Conjugate	0.1mg/1vial	[H1619]
Sheep Anti-Chicken IgY HRP Conjugate	0.1mg/1vial	[S0999]

Streptavidin

Streptavidin from *Streptomyces avidinii*	1mg/1vial	[S0951]
Streptavidin HRP Conjugate	0.1mg/1vial	[S0972]
Streptavidin FITC Conjugate	0.1mg/1vial	[S0966]
Streptavidin DTBTA-Eu^{3+} Conjugate	0.1mg/1vial	[S0993]
Streptavidin Maleimide Conjugate	0.1mg/1vial	[T3531]

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