

# Anti-Non-Human Glycoform Antibodies

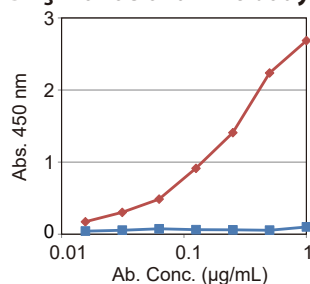
## Anti-NeuGc Polyclonal Antibodies

*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.

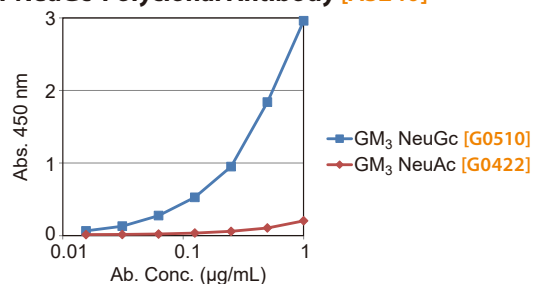
<b>Anti-NeuGc Polyclonal Antibody</b>	0.05mg/vial <a href="#">[A3240]</a>
<b>Anti-NeuGc Polyclonal Antibody Biotin Conjugate</b>	0.05mg/vial <a href="#">[A3294]</a>
<b>Anti-NeuGc Polyclonal Antibody FITC Conjugate</b>	0.05mg/vial <a href="#">[A3295]</a>
<b>Anti-NeuGc Polyclonal Antibody R-PE Conjugate</b>	0.05mg/vial <a href="#">[A3360]</a>
<b>Anti-NeuGc Polyclonal Antibody HRP Conjugate</b>	0.05mg/vial <a href="#">[A3397]</a>

### Anti-NeuGc Polyclonal Antibody reacts NeuGc but not NeuAc

**Anti-GM<sub>3</sub> Monoclonal Antibody [\[A2582\]](#)**

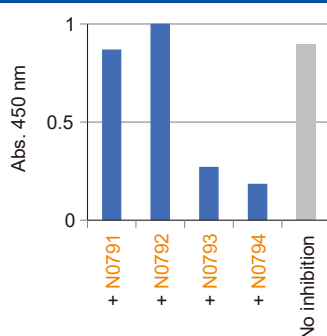


**Anti-NeuGc Polyclonal Antibody [\[A3240\]](#)**



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

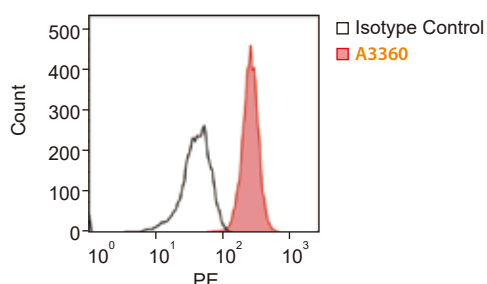
### Binding of Anti-NeuGc Antibody is inhibited by NeuGcα(2-3)Gal and NeuGcα(2-6)Gal



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.

- Neu5Aca(2-3)Galβ MP Glycoside [\[N0791\]](#)**
- Neu5Aca(2-6)Galβ MP Glycoside [\[N0792\]](#)**
- Neu5Gca(2-3)Galβ MP Glycoside [\[N0793\]](#)**
- Neu5Gca(2-6)Galβ MP Glycoside [\[N0794\]](#)**

### Detection of NeuGc in miniature pig granulocytes by flow cytometry



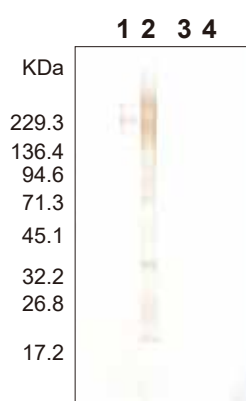
Granulocytes were collected by hemolyzing the blood of miniature pigs. The granulocytes were incubated (4 °C, 20 minutes) with isotype control (black line) or anti-NeuGc polyclonal antibody R-PE conjugate [\[A3360\]](#) (red line) adjusted to 10 µg/mL. Afterward, it was measured using a flow cytometer.

## Anti- $\alpha$ Gal Polyclonal Antibodies

Anti- $\alpha$ Gal antibody exists as a natural antibody in humans. Binding of this antibody to  $\alpha$ Gal antigens ( $\alpha$ Gal 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  $\alpha$ Gal epitope, which indicates the importance of rapid detection of  $\alpha$ Gal epitope.

<b>Anti-<math>\alpha</math>Gal Polyclonal Antibody (Chicken)</b>	0.05mg/vial [A3123]
<b>Anti-<math>\alpha</math>Gal Polyclonal Antibody Biotin Conjugate</b>	0.05mg/vial [A3144]
<b>Anti-<math>\alpha</math>Gal Chicken Polyclonal Antibody HRP Conjugate</b>	0.05mg/vial [A3195]
<b>Anti-<math>\alpha</math>Gal Polyclonal Antibody FITC Conjugate</b>	0.05mg/vial [A3337]
<b>Anti-<math>\alpha</math>Gal Polyclonal Antibody R-PE Conjugate</b>	0.05mg/vial [A3354]

### Anti- $\alpha$ Gal antibody can be utilized for detection of the $\alpha$ Gal epitope on glycoproteins



Western blotting analysis performed using an anti- $\alpha$ Gal polyclonal antibody biotin conjugate [A3144].

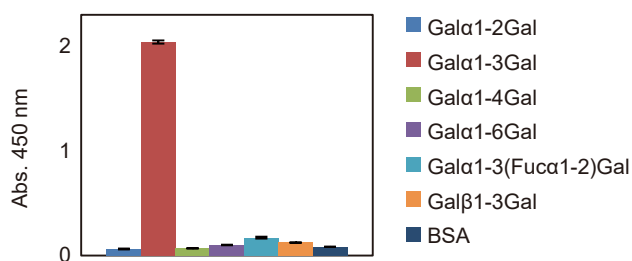
Lane 1: Thyroglobulin, porcine thyroid gland.

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

Lane 3: Thyroglobulin treated with  $\alpha$ 1-3, 4, 6 galactosidase.

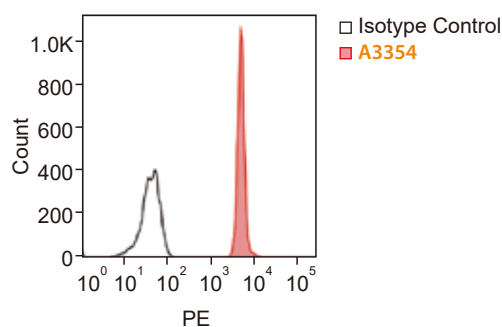
Lane 4: Laminin treated with  $\alpha$ 1-3, 4, 6 galactosidase.

### Anti- $\alpha$ Gal polyclonal antibody shows high specificity for $\alpha$ Gal epitope



Glycoconjugates coated on ELISA plates. Results following epitope and anti- $\alpha$ Gal antibodies incubation. Primary antibodies were detected using appropriate secondary antibodies.

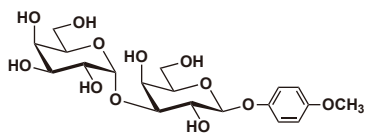
### Detection of $\alpha$ Gal in miniature pig granulocytes by flow cytometry



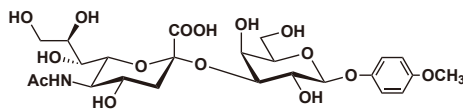
Granulocytes were collected by hemolyzing the blood of miniature pigs. The granulocytes were incubated (4 °C, 20 minutes) with isotype control (black line) or anti- $\alpha$ Gal polyclonal antibody R-PE conjugate [A3354] (red line) adjusted to 10  $\mu$ g/mL. Afterward, it was measured using a flow cytometer.

## Related Products (Non-Human Glycoform Research Reagents)

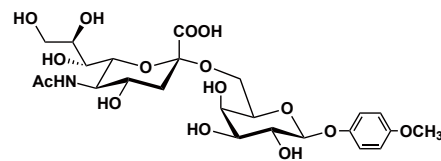
### Oligosaccharides



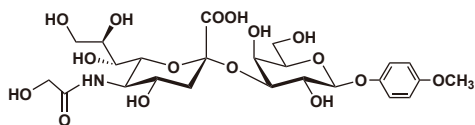
**Gal(1-3)Gal-β-MP**  
[G0461]



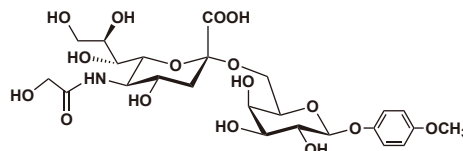
**Neu5Aca(2-3)Galβ MP Glycoside**  
[N0791]



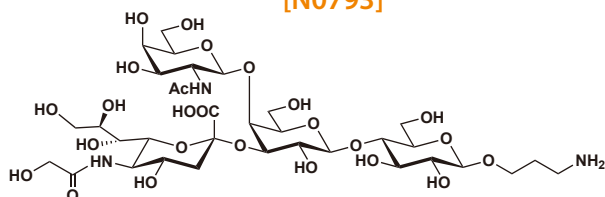
**Neu5Aca(2-6)Galβ MP Glycoside**  
[N0792]



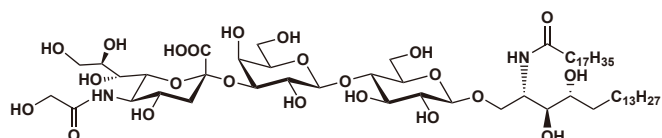
**Neu5Gca(2-3)Galβ MP Glycoside**  
[N0793]



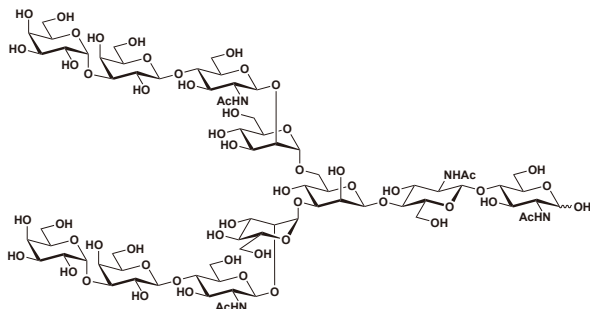
**Neu5Gca(2-6)Galβ MP Glycoside**  
[N0794]



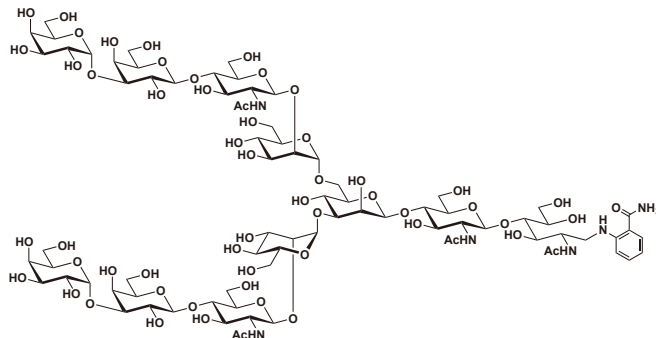
**Neu5Gca(2-3)[GalNAcβ(1-4)]Galβ(1-4)Glc-β-propylamine**  
[N0971]



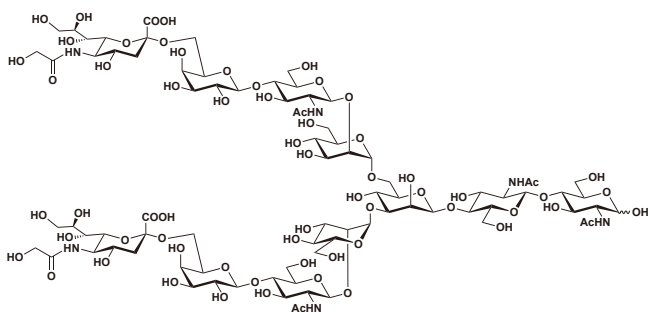
**Ganglioside GM<sub>3</sub>(Neu5Gc) (phyto-type)**  
[G0510]



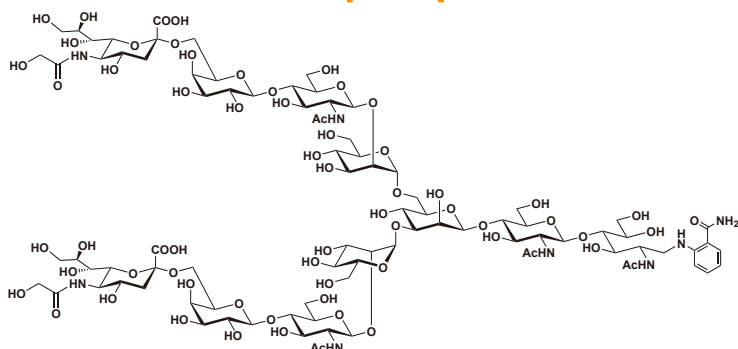
**Gal(1-3) N-Glycan**  
[G0488]



**Gal(1-3) N-Glycan 2AB**  
[G0494]



**Neu5Gca(2-6) N-Glycan**  
[N1064]



**Neu5Gca(2-6) N-Glycan 2AB**  
[N1075]

### Lectins

#### [α1-3Gal binding lectins]

Recombinant <i>Marasmius oreades</i> agglutinin(= rMOA) expressed in <i>Escherichia coli</i>	1mL [R0227]
rMOA-Biotin [for Gal(1-3)Gal]	1mL [R0232]
rMOA-LecBeads [for Gal(1-3)Gal]	1mL/vial [R0237]

## Related Products (Peroxidase Substrates)

**TMB [for ELISA] (Ready-to-use solution)**

(= 3,3',5,5'-Tetramethylbenzidine (Ready-to-use solution))

100mL [T3854]

### Application

1. Add 100µL of TMB solution [T3854] to each well.
2. Incubate the plate at room temperature for 30 minutes.
3. Add 100µL of 1N HCl solution [H1202] to each well to terminate the reaction.
4. Measure the absorbance of each well at 450 nm.

When T3854 reacts with horseradish peroxidase (HRP), a blue colored soluble reaction product appears thus it can be used for ELISA.

This product cannot be used for Western blotting which needs a precipitate.



Figure.  
An example of use by the above method

**TMB [for Western blotting] (Ready-to-use solution)**

(= 3,3',5,5'-Tetramethylbenzidine (Ready-to-use solution))

100mL [T3855]

**AzBTS [for ELISA] (Ready-to-use solution) [for ELISA]**

(= 2,2'-Azinobis(3-ethylbenzothiazoline-6-sulfonic Acid Ammonium Salt)

(Ready-to-use solution))

100mL [A3176]

## Related Products (Secondary Antibodies and Streptavidins)

### Anti-Chicken IgY

**Sheep Anti-Chicken IgY**

1mg/vial [S0998]

**Sheep Anti-Chicken IgY Biotin Conjugate**

0.1mg/vial [H1619]

**Sheep Anti-Chicken IgY HRP Conjugate**

0.1mg/vial [S0999]

### Streptavidins

**Streptavidin from *Streptomyces avidinii***

1mg/vial [S0951]

**Streptavidin HRP Conjugate**

0.1mg/vial [S0972]

**Streptavidin FITC Conjugate**

0.1mg/vial [S0966]

**Streptavidin DTBTA-Eu<sup>3+</sup> Conjugate**

0.1mg/vial [S0993]

**Streptavidin Maleimide Conjugate**

0.5mg/vial [T3531]

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