

Code No. 28047

**Anti- $\alpha$ 2, 6-Sialyltransferase (M2) Rabbit IgG Affinity Purify**Volume : 100  $\mu$ g

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**Introduction** : The histopathological picture of Alzheimer's disease is characterized by senile plaques and neurofibrillary tangles, and because the senile plaques form first, they are considered the initial lesion. Senile plaques are known to be formed by accumulation of  $\beta$ -amyloid peptide ( $A\beta$ ).  $A\beta$  peptide is produced by the cleavage of amyloid precursor protein (APP) by two types of proteolytic enzymes. The first cleavage is performed by  $\beta$ -secretase (BACE1), and the second  $\gamma$ -secretase. It is thought that their inhibitors may be capable of serving as safe drugs for the treatment of Alzheimer's disease.

In recent years a glycosyltransferase involved in the biosynthesis of sugar chains ( $\alpha$ 2, 6-sialyltransferase) has also been shown to be cleaved by BACE1. The cleavage site was identified at the same time, and as a result it was demonstrated that in rats it produces cleaved-type  $\alpha$ 2, 6-sialyltransferase (E41 Form).

This product is purified antibody which can detect human, mouse or rat  $\alpha$ 2, 6-sialyltransferase whether or not it is cleaved.

**Antigen** : Synthetic peptide of a part of  $\alpha$ 2, 6-sialyltransferase (NSQLVTTEKRFLKDSL) (the part common to human, mouse and rat)

**Purification** : Purified with antigen peptide

**Form** : Lyophilized product from 1 % BSA in PBS containing 0.05 %  $\text{NaN}_3$

**How to use** : 1.0 mL deionized water will be added to the product (the conc. comes up 100  $\mu$ g /mL)

**Stability** : Lyophilized product, 5 years at 2 - 8  $^{\circ}$ C  
: Solution, 2 years at -20  $^{\circ}$ C

**Application** : This antibody can be used for western blotting in concentration of 1 - 5  $\mu$ g/mL.

**Specificity** : Reacts with human, mouse, rat  $\alpha$ 2, 6-sialyltransferase

**Reference** : 1. Kitazume S, Saido TC, Hashimoto Y. Identification of a novel substrate of Alzheimer's beta-secretase: beta-secretase dependent cleavage of alpha 2,6-sialyltransferase. *Seikagaku*. 2002 Sep; 74(9): 1180-1183.  
2. Kitazume-Kawaguchi S, Dohmae N, Takio K, Tsuji S, Colley KJ. The relationship between ST6Gal I Golgi retention and its cleavage-secretion. *Glycobiology*. 1999 Dec; 9 (12): 1397-406.  
3. Kitazume S, Tachida Y, Oka R, Shirotani K, Saido TC, Hashimoto Y. Alzheimer's beta-secretase, beta-site amyloid precursor protein-cleaving enzyme, is responsible for cleavage secretion of a Golgi-resident sialyltransferase. *Proc Natl Acad Sci U S A*. 2001 Nov 20; 98 (24): 13554-9.  
4. Kitazume S, Tachida Y, Oka R, Kotani N, Ogawa K, Suzuki M, Dohmae N, Takio K, Saido TC, Hashimoto Y. Characterization of alpha 2,6-sialyltransferase cleavage by Alzheimer's beta-secretase (BACE1). *J Biol Chem*. 2003 Apr 25; 278 (17): 14865-71.

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