

Code No. 18911

**Anti-Human  
Tob (Phosphorylated) Rabbit IgG Affinity Purify**Volume : 100 µg

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**Tob: Transducing molecule of c-ErbB-2**

- Introduction** : Tob was identified as a molecule that binds to the receptor tyrosine kinase c-ErbB2 in 1996.  
After that, Tob2, BTG1, PC3/TIS21/BTG2, ANA, PC3B etc were found as proteins with a homologous region at about 110 amino acids on the N-terminal side, and are called Tob family proteins.  
Tob family proteins are known to suppress cell proliferation when compulsorily expressed in cultured cells.  
This proliferative suppression occurs by blocking the expression of cyclin D1.  
On the other hand, Tob is rapidly phosphorylated at Ser152, Ser154 and Ser164 by Erk1/2 upon growth-factor stimulation.  
It is suggested that this phosphorylation cancels the suppression of cyclin D1 expression.  
Thus, it is thought to be Tob and its phosphorylation have important role in the progression from G0 to G1 in the cell cycle.
- Antigen** : Synthetic peptide of human Tob protein (phosphorylated)  
(ASSVSS(pS)P(pS)PPFGHS)
- Purification** : Purified with antigen peptide
- Form** : Lyophilized product from 1 % BSA in PBS containing 0.05% NaN<sub>3</sub>
- How to use** : 1.0 mL deionized water will be added to the product (the conc. comes up 100 µg /mL)
- Stability** : Lyophilized product, 5 years at 2 – 8 °C  
: Solution, 2 years at –20 °C
- Application** : This antibody can be used for immunohistochemistry with formalin fixed paraffin embedded tissues after microwave pre-treatment (10 min, 10 mM citrate buffer, pH 6.0) by several techniques such as Avidin Biotin Complex (ABC) Method. The optimal concentration is about 5 µg/mL, however, the concentration should be optimized by each laboratory.  
: This antibody can be used for western blotting in concentration of about 2 µg /mL.
- Specificity** : Confirmed by western blotting using transfectant cells.
- Reference** : 1. Suzuki T, K-Tsuzuku J, Ajima R, Nakamura T, Yoshida Y, Yamamoto T. Phosphorylation of three regulatory serines of Tob by Erk1 and Erk2 is required for Ras-mediated cell proliferation and transformation. *Genes Dev.* 2002 Jun 1;16(11):1356-70.  
2. Maekawa M, Nishida E, Tanoue T. Identification of the Anti-proliferative protein Tob.  
3. Yoshida Y, Tanaka S, Umemori H, Minowa O, Usui M, Ikematsu N, Hosoda E, Imamura T, Kuno J, Yamashita T, Miyazono K, Noda M, Noda T, Yamamoto T. Negative regulation of BMP/Smad signaling by Tob in osteoblasts. *Cell.* 2000 Dec 22;103(7):1085-97.
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