



## **Anti-Prothymosin alpha 1, Rabbit-Polyclonal Antibody**

**Catalog No.** GB-30019

**Antigen species:** Human

**Host species:** Rabbit

**Quantity:** 250 $\mu$ l

**Reactivity:** Human, rat, bovin

**Form:** Antiserum

**Applications tested:** ELISA

### **Target description**

The thymus gland produces several hormones or hormone-like substances which are derived from a polypeptide precursor containing (in the rat) 113 amino acids and known as prothymosin-alpha. A peptide containing 28 amino acid residues, named thymosin-alpha-1, was originally isolated from calf thymosin fraction 5 and shown to restore various aspects of immune function in several in vitro and in vivo test systems. Thymosin-alpha-1 was subsequently isolated from a similar fraction from human thymosin and reported to have the same amino acid sequence as bovine thymosin-alpha-1. In 2003, Jiang et al. identified a pathway that regulates mitochondria-initiated caspase activity. In this pathway, putative human HLA class II-associated protein (PHAP) promoted caspase-9 activation after apoptosome formation, whereas prothymosin-alpha-1 negatively regulated caspase-9 activation by inhibiting apoptosome formation.

### **Antigen**

This polyclonal antibody was raised by immunizing rabbit with synthetic peptide located within the N-terminal half of human prothymosin alpha 1 domain.

### **Application**

The antibody titer is more than 100K for ELISA. It has not been tested in the other applications. However, for the first testing, we recommend 1/5000 dilution for ELISA, 1/1000 dilution for Western blot analysis of recombinant protein, 1/400 dilution for tissue extracts or cell lysates, 1/100 dilution for immunohistochemistry (IHC) staining on frozen cryosections, 1/50 dilution for IHC staining on paraffin embedded sections.

### **Related Products**

1. Anti-MMP2 pAb (GB-10342).
2. Anti-BMP17 pAb (GB-10001)
3. Anti-MMP17 pAb (GB-10042).
4. Anti-MMP1 pAb (PY-10174).
5. Anti-MMP12(a.a.35-117) pAb (PY-10169).

Ab dilution	Pre-bleed	Anti-serum
<b>1:1K</b>	0.119	1.043
<b>1:10K</b>	0.090	0.828
<b>1:100K</b>	0.075	0.408
<b>1:1,000K</b>	0.074	0.248
<b>1:10,000K</b>	0.071	0.169
<b>Titer</b>		<b>9710K</b>

### **ELISA Protocol**

Antigen is coated on EIA strips at 1 $\mu$ g per well. Add 200 $\mu$ l of blocking buffer and then wash wells with PBST buffer. Antiserum or peptide specific purified antibody GB-30019 is diluted in series as  $10^3 \sim 10^7$  folds and added in separate wells. Incubate antibody for 1hr. Wash unbound antibodies and add anti-rabbit IgG-HRP conjugate. Wash the plates and add substrate to develop color for 5 min. Read absorbance (ABS) at 650 nm. Amount of color is directly proportional to the amount of antibodies. Antibody titer is defined as >0.1 of ABS of antiserum minus prebleed serum.

### **Storage**

It is supplied as lyophilized serum. Redissolve the lyophilized powder with 250 microliter sterile water will restore the original condition. Store at 4°C for short term application. For long-term storage, aliquot and store at -20°C.

### **References**

1. Shiau AL, Chen CC, Yo YT, Chu CY, Wang SY, Wu CL. Enhancement of humoral and cellular immune responses by an oral Salmonella choleraesuis vaccine expressing porcine prothymosin alpha. Vaccine. 2005 Dec 1;23(48-49):5563-71
2. Jiang, X., Kim, H.E., Shu, H., Zhao, Y., Zhang, H., Kofron, J., Donnelly, J., Burns, D., Ng, S.C., Rosenberg, S. and Wang, X. Distinctive roles of PHAP proteins and prothymosin-alpha in a death regulatory pathway. Science 299 (5604), 223-226 (2003)
3. Boan, F., Vinas, A., Buceta, M., Dominguez, F., Sanchez, L. and Gomez-Marquez, J. Prothymosin alpha, a mammalian c-myc-regulated acidic nuclear protein, provokes the decondensation of human chromosomes in vitro. Cytogenet. Cell Genet. 93 (3-4), 171-174 (2001)

**FOR RESEARCH USE ONLY AND NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE**