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## Tubulin抗体(小鼠单抗)

产品编号	产品名称	包装
AT819	Tubulin抗体(小鼠单抗)	>40次

### 产品简介:

来源	用途	交叉反应性	抗体类型	Tubulin分子量
Mouse	WB, IP, IF, IHC	Mam, C, SU, CM	IgG1	~50kD

WB, Western blot; IP, Immunoprecipitation; IF, Immunofluorescence; IHC, Immunohistochemistry.

Mam, mammalian, including human, mouse, rat, bovine, African green monkey, kangaroo rat; C, chicken; SU, sea urchin; CM, chlamydomonas.

- 本Tubulin抗体(Tubulin antibody)为进口分装,用纯化的微管蛋白作为抗原制备而成的抗Tubulin小鼠单克隆抗体。克隆号为B-5-1-2。本Tubulin抗体识别 $\alpha$ -tubulin的C-terminal。
- Tubulin即微管蛋白,是细胞的一种骨架蛋白。Tubulin分为 $\alpha$ 、 $\beta$ 、 $\gamma$ 、 $\delta$ 、 $\epsilon$ 等多种tubulin,其中 $\alpha$ -tubulin和 $\beta$ -tubulin可以形成异源二聚体,是形成微管的最主要的两种tubulin。 $\alpha$ -tubulin和 $\beta$ -tubulin的蛋白水平通常不会发生改变,因此被广泛用于Western时上样量是否一致的参照。也常被用于免疫染色观察细胞的微管结构。
- 配套提供了Western一抗稀释液,可以用于Western检测时的一抗稀释。
- 建议抗体使用时的稀释比例如下(实际使用时需根据抗原水平的高低作适当调整):

WB	IP	IF	IHC
1:1000	1:100	1:500	1:500

- 本抗体如果用于常规的Western检测,至少可以检测40次。

### 包装清单:

产品编号	产品名称	包装
AT819-1	Tubulin抗体(小鼠单抗)	40 $\mu$ l
AT819-2	Western一抗稀释液	40ml
—	说明书	1份

### 保存条件:

Tubulin抗体-20 $^{\circ}$ C保存,Western一抗稀释液-20 $^{\circ}$ C或4 $^{\circ}$ C保存,一年有效。Western一抗稀释液优先推荐4 $^{\circ}$ C保存,长期不使用可以考虑-20 $^{\circ}$ C保存,但冻融可能会导致出现轻微的浑浊和少量不溶物。

### 注意事项:

- 在Western实验后,请注意回收稀释的抗体。回收的抗体在进行Western实验时至少可以重复使用10次。稀释后的抗体,包括已经使用过的稀释抗体,4 $^{\circ}$ C保存。
- 回收后重复使用的抗体,使用方法同新鲜稀释的抗体。如果在重复使用过程中发现抗体出现轻微混浊现象,可以10000g离心1-3分钟,取上清用于后续检测。如果回收的抗体出现明显的絮状物或长霉长菌等情况,则可以考虑废弃该抗体。
- 本产品仅限于专业人员的科学研究用,不得用于临床诊断或治疗,不得用于食品或药品,不得存放于普通住宅内。
- 为了您的安全和健康,请穿实验服并戴一次性手套操作。

### 使用说明:

#### 1. Western检测:

- 按照 1: 1000 用碧云天提供的 Western 一抗稀释液稀释抗体。
- 把经过封闭的蛋白膜与稀释好的一抗 4 $^{\circ}$ C 缓慢摇动过夜或室温缓慢摇动 1-2 小时,确保稀释的抗体至少能在摇动的瞬间覆盖蛋白膜。
- 回收稀释的一抗,4 $^{\circ}$ C 保存以备下次继续使用。
- 按照 Western 的实验步骤进行后续的洗涤、二抗孵育、洗涤和检测等操作。具体操作可以参考如下网页:  
<http://www.beyotime.com/support/western.htm>

#### 2. 免疫染色:

可以使用碧云天生产的免疫染色一抗稀释液(P0103)稀释抗体,使用后注意回收稀释好的一抗,具体操作可以参考如下网页:

### 3. 其它实验操作请自行参考适当的protocol进行。

#### 使用本产品的文献:

1. Wang MZ, Tian WR, Tian ZJ, Qu PP, Gao SS, Zhang ZH, Zhang QY, Hou CX and Li HH. Effect of RNA Interference Hsp72 Gene Expression on Development of Mouse Preimplantation Embryos. *Agricultural Sciences in China*. 2009;8(2):223-230.
2. Liu YL, Zhao Y, Dai ZM, Chen HM, Yang WJ. Formation of diapause cyst shell in brine shrimp, *Artemia parthenogenetica*, and its resistance role in environmental stresses. *J Biol Chem*. 2009 Jun 19; 284(25):16931-8.
3. Zhang Z, Wang Q, Li P, Zhou Y, Li S, Yi W, Chen A, Kong P, Hu C. Overexpression of the Interferon regulatory factor 4-binding protein in human colorectal cancer and its clinical significance. *Cancer Epidemiol*. 2009 Aug;33(2):130-6.
4. Hua W, Jiang J, Rong X, Wu R, Qiu H, Zhang Y, Chen Q. The dual role of the cystathionine gamma-lyase/hydrogen sulfide pathway in CVB3-induced myocarditis in mice. *Biochem Biophys Res Commun*. 2009 Oct 23;388(3):595-600.
5. Wei CJ, Tian XF, Adam RD, Lu SQ. *Giardia lamblia*: intracellular localization of alpha8-giardin. *Exp Parasitol*. 2010;126(4):489-96.
6. Li L, Cao Z, Jia P, Wang Z. Calcium signals and caspase-12 participated in paraoxon-induced apoptosis in EL4 cells. *Toxicol In Vitro*. 2010; 24(3):728-36.
7. Hong Y, Han H, Peng J, Li Y, Shi Y, Fu Z, Liu J, Lin J, Li X. *Schistosoma japonicum*: cloning, expression and characterization of a gene encoding the  $\alpha 5$ -subunit of the proteasome. *Exp Parasitol*. 2010; 126(4):517-25.
8. Fei E, Ma X, Zhu C, Xue T, Yan J, Xu Y, Zhou J, Wang G. Nucleocytoplasmic shuttling of dysbindin-1, a schizophrenia-related protein, regulates synapsin I expression. *J Biol Chem*. 2010 Dec 3; 285(49):38630-40.
9. Wu L, Zhao Q, Zhu X, Peng M, Jia C, Wu W, Zheng J, Wu XZ. A novel function of microRNA let-7d in regulation of galectin-3 expression in attention deficit/hyperactivity disorder rat brain. *Brain Pathol*. 2010 Nov; 20(6):1042-54.
10. Li B, Xu W, Xu Y, Zhang Y, Wang T, Bai Y, Han C, Zhang A, Xu Z, Chong K. Integrative study on proteomics, molecular physiology, and genetics reveals an accumulation of cyclophilin-like protein, TaCYP20-2, leading to an increase of Rht protein and dwarf in a novel GA-insensitive mutant (gaid) in Wheat. *J Proteome Res*. 2010 Aug 6;9(8):4242-53.
11. Li G, Shi Y, Huang H, Zhang Y, Wu K, Luo J, Sun Y, Lu J, Benovic JL, Zhou N. Internalization of the human nicotinic acid receptor GPR109A is regulated by G(i), GRK2, and arrestin3. *J Biol Chem*. 2010 Jul 16;285(29):22605-18.
12. Yin Z, Wang L, Xiang Y, Ruan Y, Li J, Wang X, Ichim TE, Chen S, Chen G. Resistance of neonatal porcine Sertoli cells to human xenoantibody and complement-mediated lysis is associated with low expression of alpha-Gal and high production of clusterin and CD59. *Xenotransplantation*. 2010 May-Jun;17(3):215-23.
13. Tang WJ, Wang LF, Xu XY, Zhou Y, Jin WF, Wang HF, Gao J. Autocrine/paracrine action of vitamin D on FGF23 expression in cultured rat osteoblasts. *Calcif Tissue Int*. 2010 May;86(5):404-10.
14. 张霞, 曹荣峰, 丛霞, 李金波, 孙琪, 高善颂, 田文儒. CaM 对小鼠胎儿成纤维细胞 Hsp70 表达的影响. *中国农业科学*. 2011;44(7): 1495-501.
15. Yang F, Wang MR, Ma YG, Ma WM, Yang WJ. Prawn lipocalin: characterization of a color shift induced by gene knockdown and ligand binding assay. *J Exp Zool A Ecol Genet Physiol*. 2011 Nov 1; 315(9):562-71.
16. Zou X, Jin YM, Liu PP, Wu QJ, Liu JM, Lin JJ. RNAi silencing of calcium-regulated heat-stable protein of 24 kDa in *Schistosoma japonicum* affects parasite growth. *Parasitol Res*. 2011 Mar; 108(3):567-72.
17. Li G, Deng X, Wu C, Zhou Q, Chen L, Shi Y, Huang H, Zhou N. Distinct kinetic and spatial patterns of protein kinase C (PKC)- and epidermal growth factor receptor (EGFR)-dependent activation of extracellular signal-regulated kinases 1 and 2 by humannicotinic acid receptor GPR109A. *J Biol Chem*. 2011 Sep 9;286(36):31199-212.
18. Dai L, Chen DF, Liu YL, Zhao Y, Yang F, Yang JS, Yang WJ. Extracellular matrix peptides of *Artemia* cyst shell participate in protecting encysted embryos from extreme environments. *PLoS One*. 2011;6(6):e20187.
19. Li J, Jiang J, Qian Q, Xu Y, Zhang C, Xiao J, Du C, Luo W, Zou G, Chen M, Huang Y, Feng Y, Cheng Z, Yuan M, Chong K. Mutation of rice BC12/GDD1, which encodes a kinesin-like protein that binds to a GA biosynthesis gene promoter, leads to dwarfism with impaired cell elongation. *Plant Cell*. 2011 Feb;23(2):628-40.
20. Ma L, Xu H, Zhu J, Ma S, Liu Y, Jiang RJ, Xia Q, Li S. Ras1(CA) overexpression in the posterior silk gland improves silk yield. *Cell Res*. 2011 Jun;21(6):934-43.
21. Li Q, Li J, Lan H, Wang N, Hu X, Chen L, Li N. Effects of fasting and refeeding on expression of MAFbx and MuRF1 in chick skeletal muscle. *Sci China Life Sci*. 2011 Oct;54(10):904-7.
22. Li W, Han Y, Tao F, Chong K. Knockdown of SAMS genes encoding S-adenosyl-L-methionine synthetases causes methylation alterations of DNAs and histones and leads to late flowering in rice. *J Plant Physiol*. 2011 Oct 15;168(15):1837-43.
23. Xie Y, Zhang J, Xu Y, Shao C. SirT1 confers hypoxia-induced radio resistance via the modulation of c-Myc stabilization on hepatoma cells. *J Radiat Res*. 2012;53(1):44-50.
24. Mao J, Li X, Chen W, Xu B, Zhang H, Li H, Wang L, Jin X, Zhu J, Lin G, Wang W, Chen L. Cell cycle-dependent subcellular distribution of CIC-3 in HeLa cells. *Histochem Cell Biol*. 2012 Jun;137(6):763-76.
25. Muhammad Khan, Bin Zheng, Fei Yi, Azhar Rasul, Zhuyi Gu. Pseudolaric Acid B Induces Caspase-Dependent and Caspase-Independent Apoptosis in U87 Glioblastoma Cells. *Evidence-Based Complementary and Alternative Medicine*. 2012; 2012:957568.
26. Yang Y, Jin Y, Liu P, Shi Y, Cao Y, Liu J, Shi Y, Li H, Lin J. RNAi silencing of type V collagen in *Schistosoma japonicum* affects parasite morphology, spawning, and hatching. *Parasitol Res*. 2012 Sep; 111(3):1251-7.
27. Wang J, Wu Z, Jin Q. COPI Is Required for Enterovirus 71 Replication. *PLoS One*. 2012;7(5):e38035.
28. He M, Ye S, Ren R, Dong C, Xie Y, Yuan D, Shao C. Cytochrome-c mediated a bystander response dependent on inducible nitric oxide synthase in irradiated hepatoma cells. *Br J Cancer*. 2012 Feb 28; 106(5):889-95.
29. Xie Y, Zhang J, Ye S, He M, Ren R, Yuan D, Shao C. SirT1 regulates radio sensitivity of hepatoma cells differently under normoxic and hypoxic conditions. *Cancer Sci*. 2012 Jul;103(7):1238-44.
30. Xu L, Liu T, Han F, Zong Z, Wang G, Yu B, Zhang J. AURKB and MAPK involvement in the regulation of the early stages of mouse zygote development. *Sci China Life Sci*. 2012 Jan;55(1):47-56.
31. Shen X, Wang C, Zhu Q, Li T, Yu L, Zheng W, Fei C, Qiu M, Xue F. Effect of the diclazuril on Hsp90 in the second-generation merozoites of *Eimeria tenella*. *Vet Parasitol*. 2012 Apr 30;185(2-4):290-5.
32. Wang S, Wang J, Sun Y, Song Q, Li S. PKC-mediated USP phosphorylation at Ser35 modulates 20-hydroxyecdysone signaling in *Drosophila*. *J Proteome Res*. 2012 Dec 7;11(12):6187-96.
33. Liu P, Shi Y, Yang Y, Cao Y, Shi Y, Li H, Liu J, Lin J, Jin Y. *Schistosoma japonicum* UDP-glucose 4-epimerase protein is located on the tegument and induces moderate protection against challenge infection. *PLoS One*. 2012;7(7):e42050.
34. Zhou J, Ge Z, Tan Y, Jiang G, Feng J, Wang H, Shi G. Downregulation of JWA expression in human esophageal squamous cell carcinoma and its clinical significance. *Oncol Rep*. 2012;20(4):157-62.
35. Jiang L, Lin J, Han H, Dong H, Zhao Q, Zhu S, Huang B. Identification and characterization of *Eimeria tenella* apical membrane antigen-1 (AMA1). *PLoS One*. 2012;7(7):e41115.
36. Li J, Liang S, Jin H, Xu C, Ma D, Lu X. Tiam1, negatively regulated by miR-22, miR-183 and miR-31, is involved in migration, invasion and viability of ovarian cancer cells. *Oncol Rep*. 2012 Jun;27(6):1835-42.
37. Guo W, Zhang Z, Liu X, Burnstock G, Xiang Z, He C. Developmental expression of P2X5 receptors in the mouse prenatal central and peripheral nervous systems. *Purinergic Signal*. 2013 Jun;9(2):239-48.
38. Shi QX, Zhang LJ, Yao Y, Zhang QY, Wang W, Li J, Shang YL, Bi H, Zhang SM, Guo HT, Wang YM, Yu SQ, Yi DH, Bueno FR, Kaye AD, Pei JM.  $\kappa$ -opioid Receptor Activation Prevents Against Arrhythmias by Preserving Cx43 Protein Via Alleviation of Intracellular Calcium. *Am J Ther*. 2013 Sep-Oct;20(5):493-501.

39. Duan J, Xu H, Ma S, Guo H, Wang F, Zhao P, Xia Q. Cre-mediated targeted gene activation in the middle silk glands of transgenic silkworms (*Bombyx mori*). *Transgenic Res.* 2013 Jun;22(3):607-19.
40. Yu Y, Schachner M. Syntenin-a promotes spinal cord regeneration following injury in adult zebrafish. *Eur J Neurosci.* 2013 Jul; 38(2):2280-9.
41. Han HY, Zhu SH, Jiang LL, Li Y, Dong H, Zhao QP, Kong CL, Huang B. Molecular characterization and analysis of a novel calcium-dependent protein kinase from *Eimeria tenella*. *Parasitology.* 2013 May; 140(6):746-55.
42. Lin Y, Meng Y, Wang YX, Luo J, Katsuma S, Yang CW, Banno Y, Kusakabe T, Shimada T, Xia QY. Vitellogenin receptor mutation leads to the oogenesis mutant phenotype "scanty vitellin" of the silkworm, *Bombyx mori*. *J Biol Chem.* 2013 May 10;288(19):13345-55.
43. Qian C, Wang Y, Chen Y, Zeng L, Zhang Q, Shuai X, Huang K. Suppression of pancreatic tumor growth by targeted arsenic delivery with anti-CD44v6 single chain antibodyconjugated nanoparticles. *Biomaterials.* 2013 Aug;34(26):6175-84.
44. Zhang Y, Yang L, Yang YJ, Liu XY, Jia JG, Qian JY, Wang KQ, Zuo J, Ge JB. Low-dose taurine upregulates taurine transporter expression in acute myocardial ischemia. *Int J Mol Med.* 2013 Apr;31(4):817-24.
45. Zhao N, Yang K, Yang G, Chen D, Tang H, Zhao D, Zhao C. Aberrant expression of clock gene *period1* and its correlations with the growth, proliferation and metastasis of buccal squamous cell carcinoma. *PLoS One.* 2013;8(2):e55894.
46. Ma WM, Li HW, Dai ZM, Yang JS, Yang F, Yang WJ. Chitin-binding proteins of *Artemia* diapause cysts participate in formation of the embryonic cuticle layer of cystshells. *Biochem J.* 2013 Jan 1; 449(1): 285-94.
47. Chen P, Tong XL, Li DD, Liang PF, Fu MY, Li CF, Hu H, Xiang ZH, Lu C, Dai FY. Fine mapping of a supernumerary proleg mutant (ECs -) and comparative expression analysis of the abdominal-A gene in silkworm, *Bombyx mori*. *Insect Mol Biol.* 2013 Oct;22(5):497-504.
48. Tian L, Ma L, Guo E, Deng X, Ma S, Xia Q, Cao Y, Li S. 20-hydroxyecdysone upregulates *Atg* genes to induce autophagy in the *Bombyx* fat body. *Autophagy.* 2013 Aug;9(8):1172-87.
49. Lin D, Cui Z, Kong L, Cheng F, Xu J, Lan F. p73 participates in WWOX-mediated apoptosis in leukemia cells. *Int J Mol Med.* 2013 Apr;31(4):849-54.
50. Cui Z, Lin D, Cheng F, Luo L, Kong L, Xu J, Hu J, Lan F. The role of the WWOX gene in leukemia and its mechanisms of action. *Oncol Rep.* 2013 Jun;29(6):2154-62.
51. Li Z, Bi X, Wang M, Zhang J, Song J, Shen X, Han J, Fu G, Ye Y. Inhibition of farnesyl pyrophosphate synthase prevents angiotensin II-induced cardiac fibrosis in vitro. *Clin Exp Immunol.* 2014 Jun; 176(3):429-37.
52. Zhang J, He Q, Zhang CD, Chen XY, Chen XM, Dong ZQ, Li N, Kuang XX, Cao MY, Lu C, Pan MH. Inhibition of BmNPV replication in silkworm cells using inducible and regulated artificial microRNA precursors targeting the essential viral gene *lef-11*. *Antiviral Res.* 2014 Apr;104:143-52.
53. Ye Y, Miao S, Lu R, Xia X, Chen Y, Zhang J, Wu X, He S, Qiang F, Zhou J. Allograft inflammatory factor-1 is an independent prognostic indicator that regulates  $\beta$ -catenin in gastric cancer. *Oncol Rep.* 2014 Feb; 31(2):828-34.
54. Tang C, Yang L, Jiang X, Xu C, Wang M, Wang Q, Zhou Z, Xiang Z, Cui H. Antibiotic drug tigecycline inhibited cell proliferation and induced autophagy in gastric cancer cells. *Biochem Biophys Res Commun.* 2014 Mar 28;446(1):105-12.
55. Tao X, Fan J, Kao G, Zhang X, Su L, Yin Y, Zrenner B. Angiotensin-(1-7) attenuates angiotensin II-induced signalling associated with activation of a tyrosine phosphatase in Sprague-Dawley rats cardiac fibroblasts. *Biol Cell.* 2014 Jun;106(6):182-92.
56. Qian J, Wu C, Chen X, Li X, Ying G, Jin L, Ma Q, Li G, Shi Y, Zhang G, Zhou N. Differential requirements of arrestin-3 and clathrin for ligand-dependent and -independent internalization of human G protein-coupled receptor 40. *Cell Signal.* 2014 Nov;26(11):2412-23.
57. Shang Y, Guo F, Li J, Fan R, Ma X, Wang Y, Feng N, Yin Y, Jia M, Zhang S, Zhou J, Wang H, Pei J. Activation of  $\kappa$ -opioid receptor exerts the glucose-homeostatic effect in streptozotocin-induced diabetic mice. *J Cell Biochem.* 2015 Feb;116(2):252-9.
58. Li DD, Qin YJ, Zhang X, Yin Y, Zhu HL, Zhao LG. Combined Molecular Docking, 3D-QSAR, and Pharmacophore Model: Design of Novel Tubulin Polymerization Inhibitors by Binding to Colchicine-binding Site. *Chem Biol Drug Des.* 2015 Oct;86(4):731-45.
59. Kong X, Wang GD, Ma MZ, Deng RY, Guo LQ, Zhang JX, Yang JR, Su Q. Sesamin Ameliorates Advanced Glycation End Products-Induced Pancreatic  $\beta$ -Cell Dysfunction and Apoptosis. *Nutrients.* 2015 Jun 9;7(6):4689-704.
60. Fu XF, Yao K, Du X, Li Y, Yang XY, Yu M, Li MZ, Cui QH. PGC-1 $\alpha$  regulates the cell cycle through ATP and ROS in CH1 cells. *J Zhejiang Univ Sci B.* 2016 Feb;17(2):136-46.
61. Duan YT, Man RJ, Tang DJ, Yao YF, Tao XX, Yu C, Liang XY, Makawana JA, Zou MJ, Wang ZC, Zhu HL. Design, Synthesis and Antitumor Activity of Novel link-bridge and B-Ring Modified Combretastatin A-4(CA-4) Analogues as Potent Antitubulin Agents. *Sci Rep.* 2016 May 3;6:25387.
62. Zhou C, Zha X, Shi P, Wei S, Wang H, Zheng R, Xia Q. Multiprotein bridging factor 2 regulates the expression of the fibroin heavy chain gene by interacting with Bmdimmed in the silkworm *Bombyx mori*. *Insect Mol Biol.* 2016 Aug;25(4):509-18.
63. Su M, Yu T, Zhang H, Wu Y, Wang X1, Li G. The Antiapoptosis Effect of Glycyrrhizate on HepG2 Cells Induced by Hydrogen Peroxide. *Oxid Med Cell Longev.* 2016;2016:6849758.
64. Zhang CM, Huang X, Lu HL, Meng XM, Liu DH, Kim YC, Xu WX. Up-regulation of the Ang II/AT1 receptor may compensate for the loss of gastric antrum ICC via the PI3k/Akt signaling pathway in STZ-induced diabetic mice. *Mol Cell Endocrinol.* 2016 Mar 5;423:77-86.
65. Zhu M, Zhang W, Liu F, Chen X, Li H, Xu B. Characterization of an *Apis cerana cerana* cytochrome P450 gene (*AccCYP336A1*) and its roles in oxidative stresses responses. *Gene.* 2016 Jun 15;584(2):120-8.
66. Zhou C, Zha X, Shi P, Zhao P, Wang H, Zheng R, Xia Q. Nuclear hormone receptor BmFTZ-F1 is involved in regulating the fibroin heavy chain gene in the silkworm, *Bombyx mori*. *Biochim Biophys Acta.* 2016 Nov;1860(11 Pt A):2529-36.
67. Chen H, Lin W, Zhang Y, Lin L, Chen J, Zeng Y, Zheng M, Zhuang Z, Du H, Chen R, Liu N1. IL-10 Promotes Neurite Outgrowth and Synapse Formation in Cultured Cortical Neurons after the Oxygen-Glucose Deprivation via JAK1/STAT3 Pathway. *Sci Rep.* 2016 Jul 26;6:30459.
68. Li G, Jia H, Wang H, Yan Y, Guo X, Sun Q, Xu B. A typical RNA-binding protein gene (*AccRBM11*) in *Apis cerana cerana*: characterization of *AccRBM11* and its possible involvement in development and stress responses. *Cell Stress Chaperones.* 2016 Nov; 21(6):1005-19.
69. Wu ZF, Zhang JY, Shen XY, Zhou LY, Gao YB, Hu Y, Zeng ZC. A mouse radiation-induced liver disease model for stereotactic body radiation therapy validated inpatients with hepatocellular carcinoma. *Med Phys.* 2016 Jul;43(7):4349.
70. Cheang TY, Zhou HY, Chen W, Zhang B, Liu L, Yang J, Wang S, Li H. C14orf166 overexpression correlates with tumor progression and poor prognosis of breast cancer. *J Transl Med.* 2016 Feb 17;14:54.

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