

Diallyl Trisulfide (H₂S donor) 二烯丙基三硫

产品编号	产品名称	包装规格
NBS5893-25mg	Diallyl Trisulfide (H ₂ S donor) 二烯丙基三硫	25mg
NBS5893-100mg	Diallyl Trisulfide (H ₂ S donor) 二烯丙基三硫	100mg

产品简介:

二烯丙基三硫 (Diallyl Trisulfide, DATS) 是一种大蒜中发现的有机多硫化物, 用作一种天然的硫化氢 (H₂S) 供体。DATS 能够减少前列腺癌细胞 PC-3 的存活率 (IC₅₀=22 μM) 和抑制人结肠腺癌细胞 HCT15 的生长 (IC₅₀=11.5μM)。体内, DATS 阻抑前列腺癌 PC-3 细胞裸鼠移植瘤生长, 诱导血管平滑肌松弛。

产品特性:

CAS NO.: 2050-87-5

化学名: di-2-propen-1-yl trisulfide

同义名: DATS; NSC 651936;二烯丙基三硫醚; 二烯丙基三硫化物;

分子式: C₆H₁₀S₃

分子量: 178.34

外观: 液体

纯度: ≥95%

溶解性: 溶于 DMSO (≥10mg/ml)、乙醇 (≥5mg/ml)、不溶于水

保存条件:

-20℃ 保存, 至少 1 年稳定。

产品使用:【源自文献, 仅作参考】

文献 1, Jiang, Xy., Zhu, Xs., Xu, Hy. et al. Diallyl trisulfide suppresses tumor growth through the attenuation of Nrf2/Akt and activation of p38/JNK and potentiates cisplatin efficacy in gastric cancer treatment. Acta Pharmacol Sin 38, 1048–1058 (2017). <https://doi.org/10.1038/aps.2016.176>

体外研究 (In Vitro Assay):

细胞类型 (Cell type): BGC-823 and GSE-1 cell

实验方法 (Cell viability assay): The sulforhodamine B (SRB) assay was performed as described to measure BGC-823 and GSE-1 cell viability after DATS treatment. Briefly, 3.0×10^3 cells/well were grown in 96-well plates for 12 h and exposed to different concentrations of DATS (0–400 $\mu\text{mol/L}$) for 24 or 48 h.

体内研究 (In Vivo Assay):

动物模型 (Animal Model): Tumor xenograft mice model

实验方法 (Assay): To establish gastric carcinoma xenograft tumors in mice, BGC-823 cells (5.0×10^6) were suspended in 100 μL PBS and subcutaneously injected into the mice. The mice were sacrificed a month later. The tumor was separated by 2 mm fragments and implanted into other mice. When tumor volumes reached approximately 100 mm^3 , mice were randomized and assigned to the following treatments: control (normal saline, containing 20% β -cycloamylose, every day); cisplatin (5 mg/kg, positive control, every 5 d); treated groups (DATS was formed with β -cycloamylose and dissolved in normal saline, dosage at 20, 30 or 40 $\text{mg} \cdot \text{kg}^{-1} \cdot \text{d}^{-1}$); and the co-treated group (cisplatin, 5 mg/kg every 5 d and DATS at 30 mg/kg all other days). All mice were sacrificed on the 32nd day, and the tumors were excised for weight measurement and histopathological analysis.

文献 2, Predmore BL, Kondo K, Bhushan S, Zlatopolsky MA, King AL, Aragon JP, Grinsfelder DB, Condit ME, Lefer DJ. The polysulfide diallyl trisulfide protects the ischemic myocardium by preservation of endogenous hydrogen sulfide and increasing nitric oxide bioavailability. *Am J Physiol Heart Circ Physiol.* 2012 Jun 1;302(11):H2410-8. doi: 10.1152/ajpheart.00044.2012. Epub 2012 Mar 30. PMID: 22467307; PMCID: PMC3378306.

体内研究 (In Vivo Assay):

动物模型 (Animal Model): Tumor xenograft mice model

配制方法 (Formulation): DATS was maintained in sealed amber glass ampules and kept at -20°C until use. On the day of experimentation, a fresh glass ampule of DATS was opened. DATS (5 μL) was diluted in 500 μL of 100% DMSO. For in vivo experiments, the DATS in 100% DMSO solution was further diluted in sterile saline to obtain the correct dosage to be delivered in a volume of 50 μL . The resulting concentration of DMSO in this dosage was 1%. Vehicle consisted of a solution of 1% DMSO in sterile saline.

实验方法 (Assay): DATS was administered at 200 $\mu\text{g/kg}$ before reperfusion by either an

intravenous injection 5 min before reperfusion or an intraperitoneal injection 22.5 min before reperfusion. After 24 h of reperfusion, the LV area at risk (AAR) and infarct size were determined by Evan's blue and 2,3,5-tetrazolium chloride staining, as previously described.

注意事项:

1. 本品并非商业化的临床药物, 仅用作科研用途, 不得用作临床诊断或治疗, 不得用于食品或药品, 绝对禁止用在人身上。
2. 为了您的安全和健康, 请穿实验服并戴一次性手套操作。

参考文献:

- [1] Benavides, G.A., Squadrito, G.L., Mills, R.W., et al. Hydrogen sulfide mediates the vasoactivity of garlic. *Proc. Natl. Acad. Sci. USA* 104(46), 17977-17982 (2007).
- [2] Xiao, D., Choi, S., Johnson, D.E., et al. Diallyl trisulfide-induced apoptosis in human prostate cancer cells involves c-jun N-terminal kinase and extracellular-signal regulated kinase-mediated phosphorylation of Bcl-2. *Oncogene* 23(33), 5594-5606 (2004).
- [3] Hosono, T., Fukao, T., Ogihara, J., et al. Diallyl trisulfide suppresses the proliferation and induces apoptosis of human colon cancer cells through oxidative modification of β -tubulin. *J. Biol. Chem.* 280(50), 41487-41493 (2005).
- [4] Xiao, D., Lew, K.L., Kim, Y.A., et al. Diallyl trisulfide suppresses growth of PC-3 human prostate cancer xenograft in vivo in association with bax and bak induction. *Clin. Cancer Res.* 12(22), 6836-6843 (2006).

本产品仅用于生命科学研究, 不得用于医学诊断及其他用途!

相关产品：

产品编号	产品名称	包装规格
NBS5849-1mg	AP219 (Control Compound for AP39)	1mg
NBS5850-1mg	AP39 (Mitochondrial H ₂ S Donor)线粒体硫化氢供体	1mg
NBS5858-1mg	H ₂ S Donor 5a 硫化氢供体 5a	1mg
NBS5859-10mg	GYG 4137 (H ₂ S Donor) 硫化氢供体	10mg
NBS5860-1mg	WSP-1 (H ₂ S Probe) 硫化氢荧光探针	1mg
NBS5861-1mg	WSP-5 (H ₂ S Probe) 硫化氢荧光探针	1mg
NBS5820-1mg	7-Azido-4-methylcoumarin (AzMC)硫化氢荧光探针	1mg
NBS5862-1mg	CAY10731 (H ₂ S Probe) 硫化氢荧光探针	1mg
NBS5863-1mg	Sulfidefluor 7 AM (SF7-AM)硫化氢荧光探针	1mg
NBS5864-1mg	MitoA (Mitochondrial H ₂ S Probe)线粒体硫化氢探针	1mg
NBS5865-5mg	PSP (Hydrogen Polysulfide Probe) 多硫化氢荧光探针	5mg
NBS5866-50mg	Hypotaurine (H ₂ S scavenger) 亚牛磺酸 (硫化氢清除剂)	50mg
NBS5867-250mg	DL-Propargylglycine (PAG) DL-炔丙基甘氨酸 (CSE 抑制剂)	250mg
NBS5868-250mg	DL-Propargylglycine (PAG) (hydrochloride) DL-炔丙基甘氨酸盐酸盐 (CSE 抑制剂)	250mg