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产品名称: **TD-198946**
产品别名: **TD-198946**

生物活性:					
Description	TD-198946, a thienindazole derivative, is a potent chondrogenic agent.				
In Vitro	TD-198946 is a potent chondrogenic agent. TD-198946 strongly induces chondrogenic differentiation without promoting hypertrophy in cell and metatarsal organ cultures. TD-198946 induces stronger Col2a1 promoter activity than insulin in ATDC5 cells. In C3H10T1/2 cells, ATDC5 cells and primary mouse chondrocytes, TD-198946 dose-dependently stimulates endogenous expression of the chondrocyte markers Col2a1 and Acan, with maximum effects around 1-10 μM[1].				
In Vivo	When administered directly into the joint space, TD-198946 successfully prevents and repairs degeneration of the articular cartilage. TD-198946 exerts its effect through the regulation of Runx1 expression, which is downregulated in both mouse and human OA cartilage compared with normal tissue[1]. TD-198946 has disease-modifying effects on progressed osteoarthritis. TD-198946 may prevent the progression of osteoarthritis by acting on the remaining chondrocytes rather than repairing damaged cartilage, it may be most effective as a therapeutic during the early or middle stages of osteoarthritis, before the articular cartilage is fully eroded[2]. Cartilaginous cell-sheets are generated by culturing mouse and canine costal chondrocytes and human mesenchymal stem cells with TD-198946 on temperature-responsive dishes. The transplanted cell-sheets are then successfully used to promote the reconstruction of permanent cartilage, with no evidence of chondrocyte hypertrophy in the knee articular cartilage defects created in mice and canines[3].				
Solvent&Solubility	In Vitro: DMSO : ≥ 28 mg/mL (58.03 mM) * "≥" means soluble, but saturation unknown.				
		SolventMassConcentration	1 mg	5 mg	10 mg
	Preparing	1 mM	2.0723 mL	10.3616 mL	20.7232 mL
	Stock Solutions	5 mM	0.4145 mL	2.0723 mL	4.1446 mL
		10 mM	0.2072 mL	1.0362 mL	2.0723 mL
*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液 一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。 储备液的保存方式和期限 -80℃, 6 months; -20℃, 1 month。 -80℃ 储存时，请在 6 个月内使用, -20℃ 储存时，请在 1 个月内使用。					
References	[1]. Yano F, et al. A novel disease-modifying osteoarthritis drug candidate targeting Runx1. Ann Rheum Dis. 2013 May;72(5):748-53. [2]. Yano F, et al. Disease-modifying effects of TD-198946 on progressed osteoarthritis in a mouse model. Ann Rheum Dis. 2014 Nov;73(11):2062-4. [3]. Yano F, et al. Cell-sheet technology combined with a thienindazole derivative small compound TD-198946 for cartilage regeneration. Biomaterials. 2013 Jul;34(22):5581-7.				
实验参考:					



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Animal Administration	Mice: Each of the prevention and repair models had two groups: (1) TD-198946-treated animals and (2) saline-treated animals. In all the mice tested the left knee joints underwent the operation and the right knee joints are sham-operated. Mice are re-anaesthetised and given a 10 μ L intra-articular injection of TD-198946 or saline immediately after surgery (prevention model) or 4 weeks following surgery (repair model) every 5 days for 8 or 4 weeks, respectively[1].
References	[1]. Yano F, et al. A novel disease-modifying osteoarthritis drug candidate targeting Runx1. Ann Rheum Dis. 2013 May;72(5):748-53. [2]. Yano F, et al. Disease-modifying effects of TD-198946 on progressed osteoarthritis in a mouse model. Ann Rheum Dis. 2014 Nov;73(11):2062-4. [3]. Yano F, et al. Cell-sheet technology combined with a thienindazole derivative small compound TD-198946 for cartilage regeneration. Biomaterials. 2013 Jul;34(22):5581-7.

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