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产品名称: **BKT140**

产品别名: **Motixafortide; BKT140 (4-fluorobenzoyl); BL-8040; TF14016**

生物活性:					
Description	Motixafortide (BKT140 4-fluorobenzoyl) is a novel CXCR4 antagonist with an IC50 vakuue of ~1 nM.				
IC50 & Target	CXCR4				
	~1 nM (IC50)				
In Vitro	Motixafortide (BKT140) displays selective toxicity toward AmL and MM cells. Treatment with Motixafortide (BKT140) can overcome IL-6 dependent proliferation and survival of ARH77 MM cells. Motixafortide (BKT140) specifically triggers CXCR4-dependent cell death in leukemia and MM cells. Motixafortide (BKT140) stimulates apoptotic cell death in leukemia and MM cells[2].				
In Vivo	Subcutaneous injections of Motixafortide (BKT140) significantly reduces, in a dose-dependent manner, the growth of human acute myeloid leukemia and multiple myeloma xenografts. Tumors from animals treated with Motixafortide (BKT140) are smaller in size and weights, had larger necrotic areas and high apoptotic scores[2].				
Solvent&Solubility	In Vitro: DMSO : ≥ 36 mg/mL (16.67 mM) * "≥" means soluble, but saturation unknown.				
	Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
		1 mM	0.4631 mL	2.3153 mL	4.6307 mL
		5 mM	0.0926 mL	0.4631 mL	0.9261 mL
		10 mM	0.0463 mL	0.2315 mL	0.4631 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]. Peled A, et al. The high-affinity CXCR4 antagonist BKT140 is safe and induces a robust mobilization of human CD34+ cellsin patients with multiple myeloma. Clin Cancer Res. 2014 Jan 15;20(2):469-79. [2]. Beider K, et al. CXCR4 antagonist 4F-benzoyl-TN14003 inhibits leukemia and multiple myeloma tumor growth. Exp Hematol. 2011 Mar;39(3):282-92.				
实验参考:					
Cell Assay	Hematopoietic cancer cells are incubated with different concentrations of Motixafortide (BKT140) or AMD3100 for 24 hours. Motixafortide (BKT140) is treated with 1M hydrochloric acid (HCL) to achieve a pH of 2.7 to 3 at room temperature for 30 minutes and the pH is adjusted to 7 using concentrated NaOH. Proteinase K is added to Motixafortide (BKT140) at a final concentration of 100 mg/mL, incubated at 37℃ for 1 hour, and inactivated by heat treatment (65℃ for 30 minutes). After incubation, cells are stained with propidium iodide and the percent of viable PI-negative cells in culture is determined[2].				



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Animal Administration	Mice: Severe combined immune-deficient (SCID)/beige mice (C.B-17/lcrHsd-SCID-bg) are used in the study. NB4 cells resuspended in PBS are injected subcutaneously into the flanks of the mice (200 μL per mouse containing 5×10^6 cells). Tumor growth is monitored daily, and mice are randomized to drug-treated or control PBS-treated groups (10 mice per group) when the tumor size (width$\times$length) reaches 0.04 cm^2. BKT140 is administered subcutaneously at a dose of 200 mg per mouse each day for 5 days[2].
References	[1]. Peled A, et al. The high-affinity CXCR4 antagonist BKT140 is safe and induces a robust mobilization of human CD34+ cells in patients with multiple myeloma. Clin Cancer Res. 2014 Jan 15;20(2):469-79. [2]. Beider K, et al. CXCR4 antagonist 4F-benzoyl-TN14003 inhibits leukemia and multiple myeloma tumor growth. Exp Hematol. 2011 Mar;39(3):282-92.

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