Product Data Sheet

Product Name: Pivanex
Cat. No.: GC68474

Chemical Properties

Cas. No.	122110-53-6		
Formula	$C_{10}H_{18}O_4$	M.Wt	202.25
Solubility	DMSO : ≥ 100 mg/mL (494.44 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Pivanex		

Background

Pivanex (AN-9), a derivative of Butyric acid, is an orally active **HDAC** inhibitor. Pivanex down-regulates **Bcr-Abl** protein and enhances **Apoptosis**. Pivanex has antimetastic and antiangiogenic properties[1].

Pivanex (100-500 μM) exhibits significant anti-proliferation activity in K562 cells[1].
Pivanex (100-500 μM) also enhances apoptosis and caspase activity in K562 cells[1].
Pivanex (200 μM) induces enhancement in the G2-M phase, a moderate enhancement in the S phase and a slight reduction in G0-G1 of the cell cycle[1].
Pivanex (AN-9) has selective toxicity to acute leukemia and drug-resistant primary leukemia and cancer cell lines[2].

Cell Viability Assay[1]

Cell Line: K562 cells.

Concentration: 100-500 μM.

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Incubation Time:	24 hours.
Result:	Reduced the number of K562 viable cells significantly.100 μM Pivanex with 0.125 or 0.25 μM STI571 reduced the number of viable cells synergistically.

Apoptosis Analysis[1]

Cell Line:	K562 cells.
Concentration:	100-500 μM.
Incubation Time:	6-72 hours.
Result:	Increased the number of K562 apoptotic cells significantly.Increased the caspase activity in K562 cells significantly after only 4 h of incubation with 500 μM.

Pivanex (AN9, 200 mg/kg, b.i.d, daily) significantly improves the survival of SMN7 SMA mice. Pivanex (AN9) treatment also marked delays the end stage of disease as defined by the onset of body mass loss[3].

Animal Model:	SMN7 SMA mice ($SMN2^{+/+}$; $SMN7^{+/+}$; $mSmn^{-/-}$)[3].
Dosage:	200 mg/kg.
Administration:	Oral administration, b.i.d, at 09.00 and 17.00 daily.
Result:	Improved the mean lifespan of treated SMN7 SMA mice by 84.6%.Delayed the onset of body mass loss in SMN7 SMA mice by 94.9%.

[1]. Rabizadeh E, et al. Pivanex, a histone deacetylase inhibitor, induces changes in BCR-ABL expression and when combined with STI571, acts synergistically in a chronic myelocytic leukemia cell line. Leuk Res. 2007 Aug;31(8):1115-23. Epub 2007 Jan 30.

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[2]. Batova A, et al. The histone deacetylase inhibitor AN-9 has selective toxicity to acute leukemia and drug-resistant primary leukemia and cancer cell lines. Blood. 2002 Nov 1;100(9):3319-24.
[3]. Edwards JD, et al. Effect of the Butyrate Prodrug Pivaloyloxymethyl Butyrate (AN9) on a Mouse Model for Spinal Muscular Atrophy. J Neuromuscul Dis. 2016 Nov 29;3(4):511-515.

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