

AKN-028 acetate

Chemical Properties

CAS No. :

Formula: C19H18N6O2

Molecular Weight: 362.39

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

Biological Description

Description	AKN-028 acetate, a novel tyrosine kinase (TK) inhibitor, is a potent, orally active FMS-like receptor tyrosine kinase 3 (FLT3) inhibitor with an IC ₅₀ value of 6 nM. It inhibits FLT3 autophosphorylation and induces a dose-dependent cytotoxic response (mean IC ₅₀ = 1 μM). AKN-028 acetate also induces apoptosis by activation of caspase 3 and can be used in acute myeloid leukemia (AML) research [1].
Targets(IC ₅₀)	Apoptosis,Others,FLT,Caspase
In vitro	AKN-028 acetate (0.1 nM-100 μM; 15 h; mouse embryonal fibroblasts and human acute megakaryoblastic leukemia M07 cells) inhibits FLT3 and KIT autophosphorylation in a dose-dependent manner [1]. AKN-028 acetate (10 μM; 72 h; tumor cell lines) is cytotoxic to AML cell lines and induces apoptosis in the AML cell line MV4-11 [1]. In cytotoxicity assays, AKN-028 acetate showed the highest cytotoxic activity in MV4-11 and MOLM-13 (IC ₅₀ < 50 nM), followed by three other AML cell lines (IC ₅₀ = 0.5-6 μM) [1]. Western Blot Analysis demonstrated inhibition of FLT3 and KIT autophosphorylation in mouse embryonal fibroblasts overexpressing FLT-wt, FLT3-TKD, or FLT3-ITD, and in human acute megakaryoblastic leukemia M07 cells overexpressing KIT, after 15 hours of incubation (0.1 nM-100 μM) [1].
In vivo	AKN-028 acetate, administered at a dosage of 15 mg/kg via subcutaneous injection twice daily for a duration of six days, effectively inhibits the growth of primary AML and MV4-11 cells in male C57 black mice with MV4-11 xenografts, without impacting the animals' body weight [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7595 mL	13.7973 mL	27.5946 mL
5 mM	0.5519 mL	2.7595 mL	5.5189 mL
10 mM	0.2759 mL	1.3797 mL	2.7595 mL
50 mM	0.0552 mL	0.2759 mL	0.5519 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481