

Product Data Sheet

Product Name: Antiparasitic agent-30

Cat. No.: GC78913

Chemical Properties

Cas. No. 671754-20-4

Formula $C_{19}H_{19}N_3O_2$

M.Wt 321.37

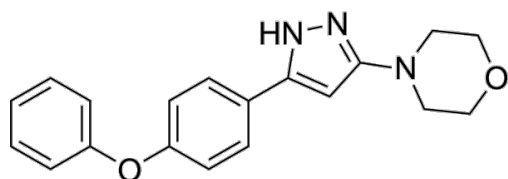
Solubility

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C 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



Background

Antiparasitic agent-30 is a potent adenosine kinase TbrAK modulator and antitrypanosomal agent. Antiparasitic agent-30 exhibits significant inhibitory activity against *Trypanosoma brucei rhodesiense*, while enhancing the activity of recombinant TbrAK (EC₅₀ = 38 nM, K_a = 75 nM-497 nM). Antiparasitic agent-30 exerts its pharmacological effects by eliminating intrinsic substrate inhibition and hyperactivating TbrAK in *Trypanosoma brucei rhodesiense*. Antiparasitic agent-30 serves as a valuable tool molecule for studying acute African human trypanosomiasis (sleeping sickness) [1].

In Vitro, Antiparasitic agent-30 (Compound 1) potently inhibits the viability of *T. b. rhodesiense*

Caution: Product has not been fully validated for medical applications. For research use only.

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parasites, with an IC_{50} of $1.0 \mu M$ ^[1]. Antiparasitic agent-30 ($1-750 \mu M$; 10 min) enhances the activity of recombinant TbrAK in a concentration-dependent manner, with an EC_{50} of $38.9 \mu M$, and increases the activity by 2.5-fold at $50 \mu M$ ^[1]. Antiparasitic agent-30 enhances the activity of recombinant TbrAK in radiometric assays, with a highly potent EC_{50} of $38 nM$ ^[1]. Antiparasitic agent-30 ($150 \mu M$) binds to two distinct sites of recombinant TbrAK ($7 \mu M$), and exhibits high affinity for the primary binding site ($K_d=75 nM$)^[1]. Antiparasitic agent-30 exhibits reduced potency against *T. b. brucei* parasites with silenced TbAK, with its IC_{50} increasing from $131 nM$ to $271 nM$, confirming that its activity depends on the expression of adenosine kinase^[1].

References:

[1]. Kuettel S, et al. Adenosine Kinase of *T. b. rhodesiense* identified as the putative target of 4-[5-(4-phenoxyphenyl)-2 H-pyrazol-3-yl] morpholine using chemical proteomics[J]. PLoS neglected tropical diseases, 2009, 3(8): e506.

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