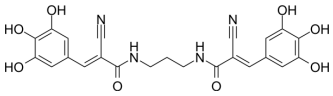
Bis-T-23

Cat. No.:	HY-123572
CAS No.:	171674-76-3
Molecular Formula:	$C_{23}H_{20}N_4O_8$
Molecular Weight:	480.43
Target:	Dynamin; HIV Integrase
Pathway:	Cytoskeleton; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Bis-T-23 (AG1717), tyrphostin derivative, is an HIV-I integrase inhibitor. Bis-T-23 can promote actin-dependent dynamin oligomerization. Bis-T-23 can be used for the research of HIV and chronic kidney diseases (CKD)[1][2].

In Vitro

Bis-T-23 (AG1717) (0.18 μM) can inhibit HIV-1 integrase[2].
AG1717 (2 μM) can inhibit binding of integrase to the substrate DNA[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Bis-T-23 (AG1717) (1 ng) targets actin-dependent dynamin oligomerization in podocytes to promote proper GFB function[1].
Bis-T-23 (i.p.; 20, 40 mg/kg) ameliorate proteinuria by altering actin dynamics[1].
Bis-T-23 (i.p.; 20, 40 mg/kg) ameliorates or prevented proteinuria and diminished mesangial matrix expansion in diverse genetic and chronic models of glomerular disease in rodents[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Sprague-Dawley rats (8 weeks old, males); Mice[1]
Dosage:	20, 40 mg/kg; 40 mg/kg
Administration:	Intraperitoneal injection; signle, once for 6 consecutive days
Result:	Specifically reduced proteinuria on days 18 and 24. Caused a transient reduction of proteinuria (single dose) in PKCε ^{KO} mice. Completely prevented the onset of high-level proteinuria in the CD2AP ^{KO} mice. Significantly extended the lifespans of CD2AP ^{KO} mice. Led to improved glomerular histology with less mesangial matrix accumulation.

Animal Model:	Zebrafish[1]
Dosage:	1 ng
Administration:	Injection
Result:	Promoted oligomerization of zebrafish Dyn2. Increased the number of focal adhesions (FAs) and stress fibers in cultured podocytes.

REFERENCES

[1]. Schiffer M, et al. Pharmacological targeting of actin-dependent dynamin oligomerization ameliorates chronic kidney disease in diverse animal models. Nat Med. 2015;21(6):601-609.

[2]. Mazumder, A.,et al. Effects of Tyrphostins, Protein Kinase Inhibitors, on Human Immunodeficiency Virus Type 1 Integrase. Biochemistry, 1995, 34(46), 15111–15122.

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

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