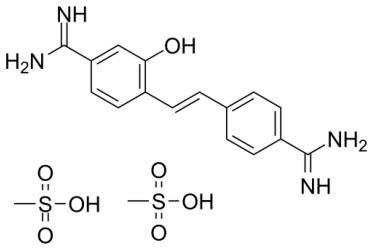
Data Sheet

Product Name:	Hydroxystilbamidine bis(methanesulfonate)
Cat. No.:	CS-8085
CAS No.:	223769-64-0
Molecular Formula:	C18H24N4O7S2
Molecular Weight:	472.54
Target:	Others
Pathway:	Others
Solubility:	10 mM in DMSO



BIOLOGICAL ACTIVITY:

Hydroxystilbamidine bis(methanesulfonate), a dye capable of binding to both DNA and RNA, has been found to be a powerful inhibitor of cellular **ribonucleases**. **In Vitro:** It is found that the trypanocidal dye Hydroxystilbamidine bis(methanesulfonate) permits the recovery of mRNA after polysome released with Nonidet P-40 (NP-40). Sucrose gradient analysis of detergent-lysed postnuclear supernates is used to analyze the size distribution of NP-40-released polysomes. The heparin gradient shows some polyribosomes, whereas the Hydroxystilbamidine bis(methanesulfonate) gradient shows a remarkably large peak of very heavy polyribosomes. This peak is obtained reproducibly if Hydroxystilbamidine bis(methanesulfonate) is present before the addition of NP-40[1]. **In Vivo:** Hydroxystilbamidine bis(methanesulfonate) is an effective suppressor of the plaque-forming cell (PFC) response when given before sheep erythrocytes (SRBC) stimulation. Hydroxystilbamidine bis(methanesulfonate) depresses the plaque response of the treated mice. Fewer PFC are observed in Hydroxystilbamidine bis(methanesulfonate)-treated mice throughout the experiment, but the level of suppression decreases with time. By day 14, the number of PFC observed in both the Hydroxystilbamidine bis(methanesulfonate) treated mice and the control group is essentially at the background level[2].

PROTOCOL (Extracted from published papers and Only for reference)

Kinase Assay: [1]Silkwork larvae are used in this study. Larvae on the fourth or fifth day of the fifth instar (~4.2 g body weight) are injected with 35 µL of a solution of 10 mg/mL cyclobeximidein H_2O. After 5 min, the animals are immobilized in ice, and posterior silk glands are dissected and washed in ice-cold 0.15 M NaCl, 0.015 M Na citrate, 100 µg/mL cycloheximide. Washed glands from two larvae are placed in a homogenizer containing 4.7 mL of 40 mM triethanolamine-HCl, pH 7.5, 0.15 M sucrose, 0.1 M KCI, 3 mM $MgCl_2$, 2 mM reduced glutathione, 10 µg/mL cycloheximide, 750 µg/mL Escherichia coli tRNA, and an appropriate concentration of RNase inhibitor (sodium heparin, 1.5 µg/mL or Hydroxystilbamidine bis(methanesulfonate), 1.5 mM)[1]. **Animal Administration:** [2]Mice (six per group) are given various doses of Hydroxystilbamidine bis(methanesulfonate) (HSB) 3, 2, and 1 day before antigen. Other groups are given Hydroxystilbamidine bis(methanesulfonate) 1 or 2 days after the injection of antigen. Another group of mice receive antigen and Hydroxystilbamidine bis(methanesulfonate) simultaneously. A control group receives only antigen. The antigen dose consists of 2×10^8 sheep erythrocytes (SRBC). Four days after the injection of SRBC, the mice are sacrificed and spleens are removed and assayed for plaque-forming cell (PFC) by the plaque assay[2].

References:

[1]. Lizardi PM. Isolation of giant silk fibroin polysomes and fibroin mRNP particles using a novel ribonuclease inhibitor, hydroxystilbamidine. J Cell Biol. 1980 Oct;87(1):292-6.

[2]. Folds JD, et al. Immunosuppression by hydroxystilbamidine isethionate, a lysosome-stabilizing, anti-proteolytic, antifungal drug. Infect Immun. 1975 Mar;11(3):441-4.

CAIndexNames:

Benzenecarboximidamide, 4-[2-[4-(aminoiminomethyl)phenyl]ethenyl]-3-hydroxy-, methanesulfonate (1:2)

SMILES:

NC(C1=CC=C(/C=C/C2=C(O)C=C(C(N)=N)C=C2)C=C1)=N.OS(=O)(C)=O.OS(=O)(C)=O

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