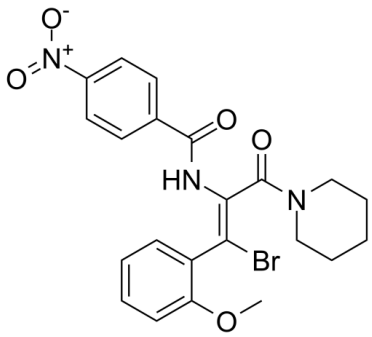
Data Sheet

Product Name:	AT-130
Cat. No.:	CS-0017999
CAS No.:	211364-06-6
Molecular Formula:	$C_{22}H_{22}BrN_3O_5$
Molecular Weight:	488.33
Target:	DNA/RNA Synthesis; HBV
Pathway:	Anti-infection; Cell Cycle/DNA Damage
Solubility:	DMSO : 25 mg/mL (51.19 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

AT-130, a phenylpropenamide derivative, is a potent **hepatitis B virus (HBV)** replication non-nucleoside inhibitor. AT-130 inhibits the viral **DNA synthesis** with an **EC_{50}** of 0.13 μM. AT-130 inhibits both wt and mutant HBVs. AT-130 has anti-HBV activity in hepatoma cells[1][2][3]. **In Vitro:** AT-130 inhibits Wt HBV (IC_{50}=2.4 μM), rtL180M HBV (IC_{50}=9.8 μM), rtM204I HBV (IC_{50}=35.6 μM)[1].

AT-130 (0.1, 1, 5, 10, 100 μM; for 7 days) causes dose-dependent inhibition of wt HBV replication in HepG2 cells transduced with HBV baculovirus. AT-130 at a concentration of 2.5 μM, reduces encapsidated HBV DNA by 50% (IC_{50}) and at 18.5 μM by 90% (IC_{90}) [1].

AT-130 has no toxic to either HepG2 or Huh-7 cells at concentrations of up to 250 μM[1].

AT-130 (0.005, 0.05, 0.5, 5, 50 μM) does not inhibit HBV DNA synthesis by blocking the HBV endogenous DNA polymerase reaction directly in Huh 7 or HepG2 cells. AT-130 inhibits HBV DNA replication in hepatoma cells but has no effect on viral DNA polymerase activity or core protein translation[3].

AT-130 (2.5, 18.5 μM) has no effect on total HBV RNA production but does reduce encapsidated RNA. AT-130 does not affect core protein or nucleocapsid production and the activity of the protein expression vector[3].

References:

[1]. William E Delaney 4th, et al. Phenylpropenamide derivatives AT-61 and AT-130 inhibit replication of wild-type and lamivudine-resistant strains of hepatitis B virus in vitro. Antimicrob Agents Chemother. 2002 Sep;46(9):3057-60.

[2]. R B Perni , et al. Phenylpropenamide derivatives as inhibitors of hepatitis B virus replication. Bioorg Med Chem Lett. 2000 Dec 4;10(23):2687-90.

[3]. J J Feld, et al. The phenylpropenamide derivative AT-130 blocks HBV replication at the level of viral RNA packaging. Antiviral Res. 2007 Nov;76(2):168-77.

CAIndexNames:

Benzamide, N-[(1E)-2-bromo-2-(2-methoxyphenyl)-1-(1-piperidinylcarbonyl)ethenyl]-4-nitro-

SMILES:

O=C(N/C(C(N1CCCCC1)=O)=C(Br)\C2=CC=CC=C2OC)C3=CC=C([N+]([O-])=O)C=C3

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

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