

## Braco-19

## Chemical Properties

CAS No. : 351351-75-2

Formula: C35H43N7O2

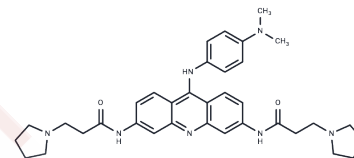
Molecular Weight: 593.76

Storage:

Store at low temperature, Keep away from direct sunlight

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	Braco-19 is a telomerase/telomere inhibitor and an inhibitor of HAdV viral replication with antiviral activity that reduces lipid vacuolization in adipocytes, inhibits proliferation and decreases telomerase activity in human glioblastoma cells.
Targets(IC50)	Antiviral,DNA/RNA Synthesis,Telomerase,Virus Protease
In vitro	At 1 $\mu$ M, the growth inhibitory effect of BRACO-19 (1.0-10 $\mu$ M; 5 days) was null, the IC50 of BRACO-19 in UXF1138L cells was 2.5 $\mu$ M, the IC100 was 5 $\mu$ M, and BRACO-19 (1 $\mu$ M; 24 h) significantly reduced the expression of hTERT in the nucleus. In eGFP-transfected HEK 293 cells, BRACO-19 (0-40 $\mu$ M; 24 h) reduced the growth of AdV viruses in a dose-dependent manner [5]; BRACO-19 (0-150 $\mu$ M; 24 h) reduced the band intensity in a concentration-dependent increase; and BRACO-19 interacted specifically with the HAdV GQ, increasing its stability and blocking the propagation of HAdV [6].
In vivo	BRACO-19 (intraperitoneal injection; 2 mg/kg; 3 weeks; starting 6 days after transplantation of UXF1138LX fragments) inhibits tumor growth significantly and under these conditions, marked single-agent antitumor activity is observed, with some animals in the group showing complete regressions (5 of 12 tumors)[5]. BRACO-19 (oral administration or intraperitoneal injection; 2 or 5 mg/kg; 3 weeks) oral dosing regimen are always inactive and the animals have to be sacrificed due to high tumor burden before overall termination of the study, Chronic, i.p. BRACO-19 administration, qdx5 is efficient in inhibiting tumor growth in earlystage xenografts but not advanced-stage xenografts[5].

## Solubility Information

Solubility	DMSO: 5 mg/mL (8.42 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.37 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may</i>

## A DRUG SCREENING EXPERT

In vivo Formulation	<i>vary and should be modified based on specific experimental conditions.</i>
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6842 mL	8.4209 mL	16.8418 mL
5 mM	0.3368 mL	1.6842 mL	3.3684 mL
10 mM	0.1684 mL	0.8421 mL	1.6842 mL
50 mM	0.0337 mL	0.1684 mL	0.3368 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.

### Reference

- Perrone R, et al. Anti-HIV-1 activity of the G-quadruplex ligand BRACO-19. *J Antimicrob Chemother.* 2014 Dec;69 (12):3248-58.
- Artusi S, et al. The Herpes Simplex Virus-1 genome contains multiple clusters of repeated G-quadruplex: Implications for the antiviral activity of a G-quadruplex ligand. *Antiviral Res.* 2015 Jun;118:123-31.
- Debray J, et al. Synthesis and evaluation of fused bispyrimidinoacridines as novel pentacyclic analogues of quadruplex-binder BRACO-19. *Org Biomol Chem.* 2009 Dec 21;7(24):5219-28.
- Zhou G, et al. Telomere targeting with a novel G-quadruplex-interactive ligand BRACO-19 induces T-loop disassembly and telomerase displacement in human glioblastoma cells. *Oncotarget.* 2016 Mar 22;7(12):14925-39.
- Burger AM, et al. The G-quadruplex-interactive molecule BRACO-19 inhibits tumor growth, consistent with telomere targeting and interference with telomerase function. *Cancer Res.* 2005 Feb 15;65(4):1489-96.
- ajee P, et al. Genome-wide analysis reveals a regulatory role for G-quadruplexes during Adenovirus multiplication. *Virus Res.* 2020 Jul 2;283:197960.

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