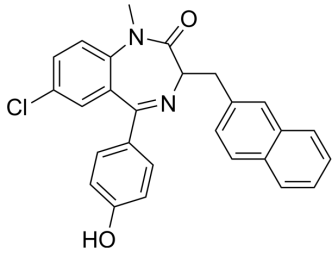
Bz 423

Cat. No.:	HY-13108
CAS No.:	216691-95-1
Molecular Formula:	$C_{27}H_{21}ClN_2O_2$
Molecular Weight:	440.92
Target:	Bcl-2 Family
Pathway:	Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 125 mg/mL (283.50 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.2680 mL	11.3399 mL	22.6798 mL
5 mM	0.4536 mL	2.2680 mL	4.5360 mL
10 mM	0.2268 mL	1.1340 mL	2.2680 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.72 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.72 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Bz 423 is a pro-apoptotic 1,4-benzodiazepine with therapeutic properties in murine models of lupus demonstrating selectivity for autoreactive lymphocytes, and activates Bax and Bak.

IC_{50} & Target

Bax Bak

In Vitro

Bz-423 induces a larger superoxide response in Ramos cells, and causes rapid death of Ramos B cells. Bz-423 activates Bax and Bak, but does not activate ASK1/JNK in Ramos cells. In Ramos cells Bz-423-induced superoxide leads to Bax and Bak activation via changes in Mcl-1 expression and functional activation of BH3-only proteins[1]. Bz-423 rapidly increases superoxide levels in MEFs within 1 h and the magnitude of the increase is concentration-dependent. Bz-423-induced

apoptosis dependents upon superoxide[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]

To detect ASK1 activity, inactive GST-MKK6 (0.1 mg) is incubated (15 min, 25°C) with immunoprecipitated ASK1 in kinase assay buffer. Subsequently, GST-p38α (0.5 μg) is added to this reaction and incubated (15 min, 25°C) followed by detection of phospho-GST-p38 via immunoblot.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Cancer. 2021 Mar 1;12(8):2422-2429.

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REFERENCES

[1]. Blatt NB, et al. Bz-423 superoxide signals B cell apoptosis via Mcl-1, Bak, and Bax. Biochem Pharmacol. 2009 Oct 15;78(8):966-73.

[2]. Blatt NB, et al. Bz-423 superoxide signals apoptosis via selective activation of JNK, Bak, and Bax. Free Radic Biol Med. 2008 Nov 1;45(9):1232-42.

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