

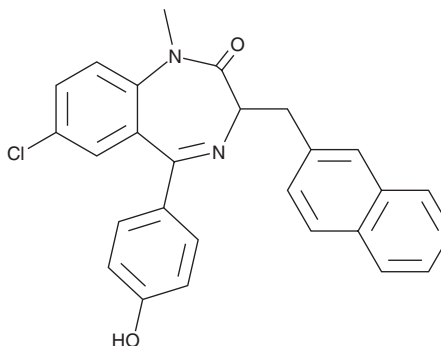
PRODUCT INFORMATION



Bz 423

Item No. 42608

CAS Registry No.: 216691-95-1
Formal Name: 7-chloro-1,3-dihydro-5-(4-hydroxyphenyl)-1-methyl-3-(2-naphthalenylmethyl)-2H-1,4-benzodiazepin-2-one
Synonym: LYC-30904
MF: C₂₇H₂₁ClN₂O₂
FW: 440.9
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Bz 423 is supplied as a solid. A stock solution may be made by dissolving the Bz 423 in the solvent of choice, which should be purged with an inert gas. Bz 423 is sparingly soluble (1-10 mg/ml) in DMSO and ethanol.

Description

Bz 423 is an inhibitor of mitochondrial complex V, also known as F₁F₀ ATP synthase.¹ It inhibits mitochondrial complex V in isolated bovine heart mitochondria when used at a concentration of 10 μM. Bz 423 (10 μM) induces apoptosis and mitochondrial cytochrome c release in Ramos B cell lymphoma cells.² It induces cell cycle arrest in the G₁ phase in Ramos cells when used at a concentration of 10 μM. Bz 423 (60 mg/kg) induces reactive oxygen species (ROS) production and decreases B cell levels in mouse spleen. It reduces total splenic T cells and Cd4⁺ T cell levels, kidney fibrosis, synovial cell proliferation, and cartilage and subchondral bone erosion in an MRL/MpJ-Fas lpr mouse model of spontaneous systemic lupus erythematosus (SLE) when administered at a dose of 60 mg/kg every two days.³

References

1. Johnson, K.M., Chen, X., Boitano, A., *et al.* Identification and validation of the mitochondrial F₁F₀-ATPase as the molecular target of the immunomodulatory benzodiazepine Bz-423. *Chem. Biol.* **12**(4), 485-196 (2005).
2. Blatt, N.B., Bednarski, J.J., Warner, R.E., *et al.* Benzodiazepine-induced superoxide signals B cell apoptosis: Mechanistic insight and potential therapeutic utility. *J. Clin. Invest.* **110**(8), 1123-1132 (2002).
3. Bednarski, J.J., Warner, R.E., Rao, T., *et al.* Attenuation of autoimmune disease in Fas-deficient mice by treatment with a cytotoxic benzodiazepine. *Arthritis Rheum.* **48**(3), 757-766 (2003).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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