

PRODUCT INFORMATION



Radicalol

Item No. 13089

CAS Registry No.: 12772-57-5

Formal Name: (4E)-8-chloro-1aR,14R,15,15aR-tetrahydro-9,11-dihydroxy-14-methyl-6H-oxireno[e][2Z]benzoxacyclotetradecin-6,12(7H)-dione

Synonyms: KF9-A, KF58332, Monorden, NSC 294404

MF: $C_{18}H_{17}ClO_6$

FW: 364.7

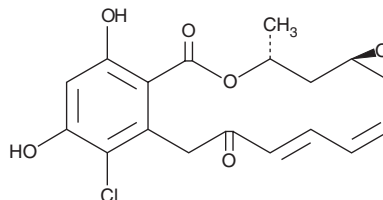
Purity: $\geq 98\%$

UV/Vis.: λ_{max} : 265 nm

Supplied as: A crystalline solid

Storage: $-20^{\circ}C$

Stability: ≥ 4 years



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

Laboratory Procedures

Radicalol is supplied as a crystalline solid. A stock solution may be made by dissolving the radicalol in an organic solvent purged with an inert gas. Radicalol is soluble in DMSO. The solubility of radicalol in DMSO is approximately 20 mg/ml.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Radicalol is an inhibitor of heat shock protein 90 (Hsp90; $IC_{50} = <1$ mM).^{1,2} It inhibits p23 from associating with Hsp90, suppresses signaling through HIF-1 α , and decreases levels of progesterone receptor, Raf-1, p185^{erbB2}, and mutant p53.^{3,4} Radicalol also binds to and inhibits DNA topoisomerase type II proteins and GRP94 through an ATPase domain common to Hsp90.^{3,5}

References

1. Kato, M., Li, J., Chuang, J.L., *et al.* Distinct structural mechanisms for inhibition of pyruvate dehydrogenase kinase isoforms by AZD7545, dichloroacetate, and radicalol. *Structure* **15**(8), 992-1004 (2007).
2. Sharma, S.V., Agatsuma, T., and Nakano, H. Targeting of the protein chaperone, HSP90, by the transformation suppressing agent, radicalol. *Oncogene* **16**(20), 2639-2645 (1998).
3. Schulte, T.W., Akinaga, S., Soga, S., *et al.* Antibiotic radicalol binds to the N-terminal domain of Hsp90 and shares important biological activities with geldanamycin. *Cell Stress Chaperones* **3**(2), 100-108 (1998).
4. Hur, E., Kim, H.H., Choi, S.M., *et al.* Reduction of hypoxia-induced transcription through the repression of hypoxia-inducible factor-1 α /aryl hydrocarbon receptor nuclear translocator DNA binding by the 90-kDa heat-shock protein inhibitor radicalol. *Mol. Pharmacol.* **62**(5), 975-982 (2002).
5. Gadelle, D., Bocs, C., Graille, M., *et al.* Inhibition of archaeal growth and DNA topoisomerase VI activities by the Hsp90 inhibitor radicalol. *Nucleic Acids Res.* **33**(7), 2310-2317 (2005).

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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