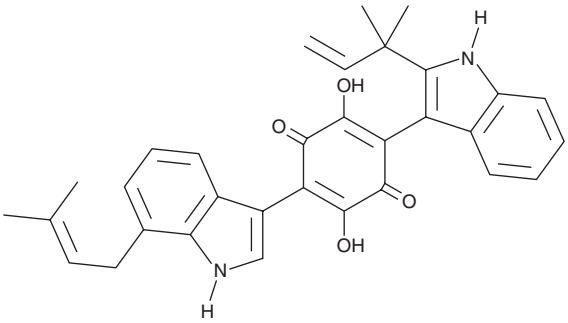
PRODUCT INFORMATION

Demethylasterriquinone B1

Item No. 21026



CAS Registry No.:	78860-34-1
Formal Name:	2-[2-(1,1-dimethyl-2-propen-1-yl)-1H-indol-3-yl]-3,6-dihydroxy-5-[7-(3-methyl-2-buten-1-yl)-1H-indol-3-yl]-2,5-cyclohexadiene-1,4-dione
Synonyms:	DMAQ B1, L-783,281
MF:	$C_{32}H_{30}N_2O_4$
FW:	506.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 222, 282, 289 nm
Supplied as:	A crystalline 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

Demethylasterriquinone B1 (DMAQ B1) is supplied as a crystalline solid. A stock solution may be made by dissolving the DMAQ B1 in the solvent of choice, which should be purged with an inert gas. DMAQ B1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DMAQ B1 in ethanol and DMSO is approximately 10 mg/ml and approximately 15 mg/ml in DMF.

DMAQ B1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DMAQ B1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. DMAQ B1 has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DMAQ B1 is a natural insulin mimic that activates insulin receptor tyrosine kinase (IRTK; EC_{50} = 6 µM).[1-4] It less potently activates IGF1R and EGFR (EC_{50}s = 100 µM for both). DMAQ B1 induces glucose uptake in adipocytes and skeletal muscle cells without activating proliferation. DMAQ B1 binds GAPDH *in vitro*.[5]

References

1. Salituro, G.M., Pelaez, F., and Zhang, B.B. Discovery of a small molecule insulin receptor activator. *Recent Prog. Horm. Res.* **56**, 107-126 (2001).
2. Tsai, H.J., and Chou, S.Y. A novel hydroxyfuroic acid compound as an insulin receptor activator. Structure and activity relationship of a prenylindole moiety to insulin receptor activation. *J. Biomed. Sci.* **16(68)**, (2009).
3. Weber, M.A., Lidor, A., Arora, S., *et al.* A novel insulin mimetic without a proliferative effect on vascular smooth muscle cells. *J. Vasc. Surg.* **32(6)**, 1118-1126 (2000).
4. Webster, N.J.G., Park, K., and Pirrung, M.C. Signaling effects of demethylasterriquinone B1, a selective insulin receptor modulator *Chembiochem*. **4(5)**, 379-385 (2003).
5. Kim, H., Deng, L., Xiong, X., *et al*. Glyceraldehyde 3-phosphate dehydrogenase is a cellular target of the insulin mimic demethylasterriquinone B1. *J. Med. Chem.* **50(15)**, 3423-3426 (2007).

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