

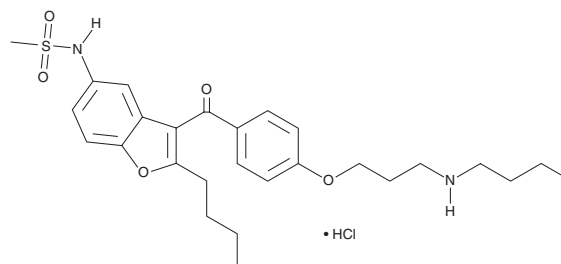
PRODUCT INFORMATION



N-Desbutyl Dronedarone (hydrochloride)

Item No. 34888

CAS Registry No.: 197431-02-0
Formal Name: N-[2-butyl-3-[4-[3-(butylamino)propoxy]benzoyl]-5-benzofuranyl]-methanesulfonamide, monohydrochloride
MF: $C_{27}H_{36}N_2O_5S \cdot HCl$
FW: 537.1
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 218, 250, 291 nm
Supplied as: A 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

N-Desbutyl dronedarone (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the N-desbutyl dronedarone (hydrochloride) in the solvent of choice, which should be purged with an inert gas. N-Desbutyl dronedarone (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of N-desbutyl dronedarone (hydrochloride) in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

N-Desbutyl dronedarone (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, N-desbutyl dronedarone (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. N-Desbutyl dronedarone (hydrochloride) has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

N-Desbutyl dronedarone is an active metabolite of the antiarrhythmic agent dronedarone (Item No. 9000543).¹⁻³ It is formed from dronedarone by cytochrome P450s (CYPs) and monoamine oxidase (MAO) in human hepatocyte preparations.⁴ N-Desbutyl dronedarone inhibits the binding of 3,3',5-triiodo-L-thyronine (T3; Item No. 16028) to the thyroid hormone receptors TR α_1 and TR β_1 (IC_{50} s = 59 and 280 μM for the chicken and human receptors, respectively).¹ It inhibits CYP2J2-mediated formation of 14,15-EET from arachidonic acid and soluble epoxide hydrolase-mediated formation of 14,15-DHET from 14,15-EET (IC_{50} s = 1.59 and 2.73 μM , respectively, in cell-free assays).² N-Desbutyl dronedarone decreases intracellular ATP levels in H9c2 rat cardiomyocytes (IC_{50} = 1.07 μM) and inhibits mitochondrial complex I, also known as NADH dehydrogenase, and mitochondrial complex II, also known as succinate dehydrogenase, activities in isolated rat heart mitochondria (IC_{50} s = 11.94 and 24.54 μM , respectively).³

References

1. Van Beeren, H.C., Jong, W.M.C., Kaptein, E., *et al.* *Endocrinology* **144**(2), 552-558 (2003).
2. Karkhanis, A., Tram, N.D.T., and Chan, E.C.Y. *Biochem. Pharmacol.* **146**, 188-198 (2017).
3. Karkhanis, A., Leow, J.W.H., Hagen, T., *et al.* *Toxicol. Sci.* **163**(1), 79-91 (2018).
4. Klieber, S., Arabeyre-Fabre, C., Moliner, P., *et al.* *Pharmacol. Res. Perspec.* **2**(3), e00044 (2014).

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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