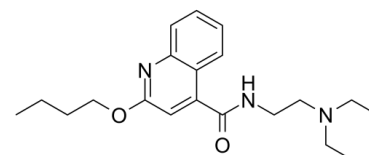


## Data Sheet

<b>Product Name:</b>	Dibucaine
<b>Cat. No.:</b>	CS-2656
<b>CAS No.:</b>	85-79-0
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>29</sub> N <sub>3</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	343.46
<b>Target:</b>	Sodium Channel
<b>Pathway:</b>	Membrane Transporter/Ion Channel
<b>Solubility:</b>	DMSO : ≥ 36 mg/mL (104.82 mM)



### BIOLOGICAL ACTIVITY:

Dibucaine (Cinchocaine) is a **sodium channel** inhibitor. Dibucaine is a potent **SChE** inhibitor<sup>[1][2]</sup>. **In Vitro:** Dibucaine (Cinchocaine) reduces the degradation of BSA-gold complex in the reservosomes, which was not caused either by an inhibition of the whole proteolytic activity of the parasite or by a reduction on the expression levels of cruzipain<sup>[1]</sup>. Dibucaine, a quaternary ammonium compound, inhibited SChE to a minimum within 2 min in a reversible manner. The inhibition was very potent. It had an IC<sub>50</sub> of 5.3 microM with BuTch or 3.8 microM with AcTch. The inhibition was competitive with respect to BuTch with a K<sub>i</sub> of 1.3 microM and a linear-mixed type (competitive/noncompetitive) with respect to AcTch with inhibition constants, K<sub>i</sub> and K<sub>I</sub> of 0.66 and 2.5 microM, respectively. Dibucaine possesses a butoxy side chain that is similar to the butryl group of BuTch and longer by an ethylene group from AcTch<sup>[2]</sup>.

### References:

- [1]. Souto-Padron, T., A.P. Lima, and O. Ribeiro Rde, Effects of dibucaine on the endocytic/exocytic pathways in Trypanosoma cruzi. Parasitol Res, 2006. 99(4): p. 317-20.
- [2]. Elamin, B., Dibucaine inhibition of serum cholinesterase. J Biochem Mol Biol, 2003. 36(2): p. 149-53.

### CAIndexNames:

4-Quinolinecarboxamide, 2-butoxy-N-[2-(diethylamino)ethyl]-

### SMILES:

O=C(C1=CC(OCCCC)=NC2=CC=CC=C12)NCCN(CC)CC

**Caution: Product has not been fully validated for medical applications. For research use only.**

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