# DHBP dibromide

**Cat. No.:** HY-101237

**CAS No.:** 6159-05-3

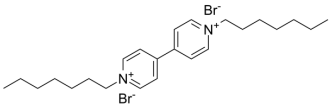
**Molecular Formula:** $C_{24}H_{38}Br_2N_2$

**Molecular Weight:** 514.38

**Target:** Calcium Channel

**Pathway:** Membrane Transporter/Ion Channel; Neuronal Signaling

**Storage:** 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



## SOLVENT & SOLUBILITY

**In Vitro**

$H_2O$ : 100 mg/mL (194.41 mM; Need ultrasonic)
DMSO : ≥ 30 mg/mL (58.32 mM)
* "≥" means soluble, but saturation unknown.

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 1.9441 mL | 9.7204 mL | 19.4409 mL |
| 5 mM | 0.3888 mL | 1.9441 mL | 3.8882 mL |
| 10 mM | 0.1944 mL | 0.9720 mL | 1.9441 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: PBS
Solubility: 50 mg/mL (97.20 mM); Clear solution; Need ultrasonic

## BIOLOGICAL ACTIVITY

**Description**

DHBP dibromide is an inhibitor for calcium release and a muscle relaxant.

**In Vitro**

DHBP inhibits the calcium release induced by 2 mM caffeine and 2 μg/mL polylysine with an $IC_{50}$ value of 5 μg/mL and 4 μg/mL, respectively. DHBP inhibits [$^3$H]-ryanodine binding in a dose-dependent manner with an $IC_{50}$ of 2.5 μg/mL and 90-100% inhibition at 20-30 μg/mL. Calcium uptake by SR is inhibited in the presence of caffeine and this inhibition is antagonized by concomitant addition of DHBP. Muscle twitches elicited by direct electrical muscle stimulation and contractions induced by either 10 mM caffeine or 1 fLM ryanodine are blocked by pretreatment with DHBP. DHBP blocks the calcium release from SR by direct interaction with the calcium release channel, also known as the ryanodine receptor[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

[1]. Kang JJ, et al. Effects of bipyridylium compounds on calcium release from triadic vesicles isolated from rabbit skeletal muscle. Br J Pharmacol. 1994 Aug;112(4):1216-22.



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