**PQCA**

**Cat. No.:** HY-118342  
**CAS No.:** 1144504-35-7  
**Molecular Formula:** C₂₂H₂₀N₄O₃  
**Molecular Weight:** 388.42  
**Target:** mAChR  
**Pathway:** GPCR/G Protein; Neuronal Signaling  
**Storage:** Please store the product under the recommended conditions in the COA.

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### BIOLOGICAL ACTIVITY

**Description**

PQCA is a highly selective and potent muscarinic M1 receptor positive allosteric modulator. PQCA has an EC₅₀ value of 49 nM and 135 nM on rhesus and human M1 receptor, respectively, and is inactive for other muscarinic receptors. PQCA improves cognitive performance and cerebral blood flow in rat, cynomolgus macaque, and rhesus macaque. PQCA has potential to reduce the cognitive deficits associated with Alzheimer's disease[1][2].

**IC₅₀ & Target**

| EC₅₀ & Target | EC₅₀: 49 nM (Rhesus M1 receptor) and 135 nM (Human M1 receptor)[1] |

**In Vivo**

PQCA (3-30 mg/kg; Oral administration; single- or pair-housed male rhesus monkeys) treatment attenuates the scopolamine deficits in PAL and CPT tasks. Blockade of muscarinic signaling by scopolamine produces significant impairments in both tasks[1].

**Animal Model:** Ten single- or pair-housed male rhesus monkeys (6-10 years old; 5.2-10.5 kg) with scopolamine[1]

**Dosage:** 3 mg/kg, 10 mg/kg, or 30 mg/kg

**Administration:** Oral administration

**Result:** Attenuated the scopolamine deficits in paired-associates learning (PAL) and the continuous-performance task (CPT).

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### REFERENCES

