

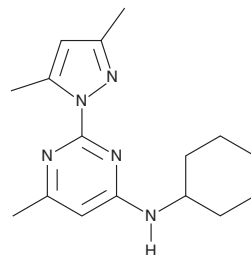
PRODUCT INFORMATION



CyPPA

Item No. 15614

CAS Registry No.: 73029-73-9
Formal Name: N-cyclohexyl-2-(3,5-dimethyl-1H-pyrazol-1-yl)-6-methyl-4-pyrimidinamine
MF: C₁₆H₂₃N₅
FW: 285.4
Purity: ≥98%
UV/Vis.: λ_{max}: 245 nm
Supplied as: A 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

CyPPA is supplied as a solid. A stock solution may be made by dissolving the CyPPA in the solvent of choice. CyPPA is soluble in organic solvents such as ethanol and DMSO, which should be purged with an inert gas. The solubility of CyPPA in these solvents is approximately 100 mM.

Description

CyPPA is a positive modulator of the small-conductance calcium-activated potassium channels K_{Ca}2.2/SK2 and K_{Ca}2.3/SK3 (EC₅₀s = 14 and 5.6 μM, respectively).¹ It is inactive on both K_{Ca}2.1/SK1 and the intermediate conductance calcium-activated potassium channel, K_{Ca}3.1/SK4.^{1,2} At K_{Ca}2.3/SK3, CyPPA increases the apparent calcium-sensitivity of channel activation, changing the EC₅₀ value of calcium activation from 429 to 59 nM.¹ CyPPA is used to evaluate the roles of K_{Ca}2.2/SK2 and K_{Ca}2.3/SK3 in such diverse processes as memory encoding, uterine muscle contraction, and dopamine signaling.³⁻⁵

References

1. Hougaard, C., Eriksen, B.L., Jyrgensen, S., *et al.* Selective positive modulation of the SK3 and SK2 subtypes of small conductance Ca²⁺-activated K⁺ channels. *Br. J. Pharmacol.* **151(5)**, 655-665 (2007).
2. Hougaard, C., Jensen, M.L., Dale, T.J., *et al.* Selective activation of the SK1 subtype of human small-conductance Ca²⁺-activated K⁺ channels by 4-(2-methoxyphenylcarbamoyloxymethyl)-piperidine-1-carboxylic acid tert-butyl ester (GW542573X) is dependent on serine 293 in the S5 segment. *Mol. Pharmacol.* **76(3)**, 569-578 (2009).
3. Vick, K.A.IV., Guidi, M., and Stackman, R.W., Jr. *In vivo* pharmacological manipulation of small conductance Ca²⁺-activated K⁺ channels influences motor behavior, object memory and fear conditioning. *Neuropharmacology* **58(3)**, 650-659 (2010).
4. Skarra, D.V., Cornwell, T., Solodushko, V., *et al.* CyPPA, a positive modulator of small-conductance Ca²⁺-activated K⁺ channels, inhibits phasic uterine contractions and delays preterm birth in mice. *Am. J. Physiol. Cell Physiol.* **301(5)**, C1027-C1035 (2011).
5. Herrik, K.F., Redrobe, J.P., Holst, D., *et al.* CyPPA, a positive SK3/SK2 modulator, reduces activity of dopaminergic neurons, inhibits dopamine release, and counteracts hyperdopaminergic behaviors induced by methylphenidate. *Front. Pharmacol.* **3(11)**, (2012).

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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