

PRODUCT INFORMATION

KW 3902

Item No. 11940

CAS Registry No.: 136199-02-5

Formal Name: 8-(hexahydro-2,5-methanopentalen-3a(1H)-yl)-3,9-dihydro-1,3-dipropyl-1H-purine-2,6-dione

Synonyms: MK-7418, Rolofylline

MF: C₂₀H₂₈N₄O₂

FW: 356.5

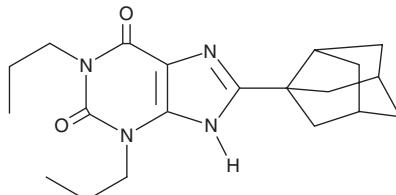
Purity: ≥98%

UV/Vis.: λ_{max}: 277 nm

Supplied as: A crystalline 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

KW 3902 is supplied as a crystalline solid. A stock solution may be made by dissolving the KW 3902 in the solvent of choice. KW 3902 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of KW 3902 in ethanol is approximately 0.5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

KW 3902 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, KW 3902 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. KW 3902 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

KW 3902 is an antagonist of the adenosine A₁ receptor (K_i = 0.19 nM).^{1,2} It displays 890-fold selectivity for A₁ receptors over A_{2A} receptors and has no activity at A₃ receptors. KW 3902 less potently inhibits human organic anion transporter 1 (OAT1; K_i = 7.82 μM).³ KW 3902 exhibits renal protective effects during hypoxemia in rabbits.⁴

References

- Shimada, J., Suzuki, F., Nonaka, H., et al. 8-Polycycloalkyl-1,3-dipropylxanthines as potent and selective antagonists for A1-adenosine receptors. *J. Med. Chem.* **35**(5), 924-930 (1992).
- Nonaka, H., Ichimura, M., Takeda, M., et al. KW-3902, a selective high affinity antagonist for adenosine A₁ receptors. *Br. J. Pharmacol.* **117**(8), 1645-1652 (1996).
- Takeda, M., Narikawa, S., Hosoyamada, M., et al. Characterization of organic anion transport inhibitors using cells stably expressing human organic anion transporters. *Eur. J. Pharmacol.* **419**(2-3), 113-120 (2001).
- Nishiyama, A., Miyatake, A., Aki, Y., et al. Adenosine A₁ receptor antagonist KW-3902 prevents hypoxia-induced renal vasoconstriction. *J. Pharmacol. Exp. Ther.* **291**(3), 988-993 (1999).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/14/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 - USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM