

PRODUCT INFORMATION



KT172

Item No. 19112

CAS Registry No.: 1402612-56-9

Formal Name: [4-(2'-methoxy[1,1'-biphenyl]-4-yl)-1H-1,2,3-triazol-1-yl][2-(phenylmethyl)-1-piperidinyl]-methanone

MF: C₂₈H₂₈N₄O₂

FW: 452.6

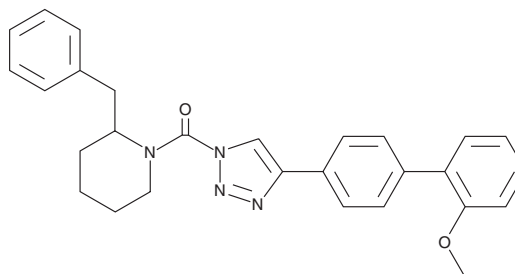
Purity: ≥98%

UV/Vis.: λ_{max}: 268 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

KT172 is supplied as a crystalline solid. A stock solution may be made by dissolving the KT172 in the solvent of choice, which should be purged with an inert gas. KT172 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of KT172 in these solvents is approximately 10 and 5 mg/ml, respectively.

KT172 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, KT172 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. KT172 has a solubility of approximately 0.25 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

KT172 is a non-selective inhibitor of diacylglycerol lipase α (DAGL α) and DAGL β .¹ It inhibits DAGL-mediated hydrolysis of 1-stearoyl-2-arachidonoylglycerol (Item No. 10008650) in HEK293T cell membranes expressing recombinant DAGL α or DAGL β (IC₅₀s = 140 and 60 nM, respectively). KT172 also inhibits α/β -hydrolase 6 (ABHD6; IC₅₀ = 5 nM) and weakly inhibits monoacylglycerol lipase (MAGL; IC₅₀ = 5,000 nM) in a panel of 47 mouse serine hydrolases. It restores nicotine-stimulated GABA release in isolated ventral tegmental area (VTA) dopamine neurons from rats chronically exposed to nicotine when used at a concentration of 1 μ M.² KT172 decreases production of 2-arachidonoyl glycerol (Item No. 62160) and subsequently reduces arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607), prostaglandin E₂ (PGE₂; Item No. 14010), and PGD₂ (Item No. 12010) in thioglycolate-stimulated peritoneal macrophages when administered at a dose of 5 mg/kg in mice.¹

References

1. Hsu, K.L., Tsuboi, K., Adibekian, A., *et al.* DAGL β inhibition perturbs a lipid network involved in macrophage inflammatory responses. *Nat. Chem. Biol.* **8**(12), 999-1007 (2012).
2. Buczynski, M.W., Herman, M.A., Hsu, K.L., *et al.* Diacylglycerol lipase disinhibits VTA dopamine neurons during chronic nicotine exposure. *Proc. Natl. Acad. Sci. U.S.A.* **113**(4), 1086-1091 (2016).

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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