

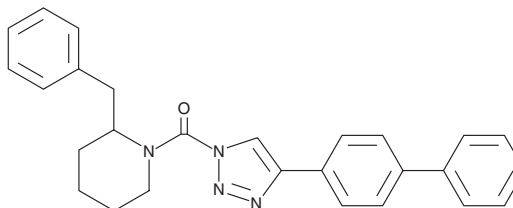
# PRODUCT INFORMATION



## KT109

Item No. 18933

**CAS Registry No.:** 1402612-55-8  
**Formal Name:** (4-[1,1'-biphenyl]-4-yl-1H-1,2,3-triazol-1-yl)[2-(phenylmethyl)-1-piperidinyl]-methanone  
**MF:** C<sub>27</sub>H<sub>26</sub>N<sub>4</sub>O  
**FW:** 422.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 278 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

KT109 is supplied as a crystalline solid. A stock solution may be made by dissolving the KT109 in the solvent of choice. KT109 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of KT109 in these solvents is approximately 10 mg/ml.

KT109 is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

### Description

In humans, two forms of diacylglycerol lipase, DAGLα and DAGLβ, generate the endocannabinoid 2-arachidonoyl glycerol (2-AG; Item No. 62160) by attacking DAG at the *sn*-1 position. KT109 is a selective inhibitor of DAGLβ with an IC<sub>50</sub> value of 42 nM.<sup>1</sup> It demonstrates ~60-fold selectivity for DAGLβ over DAGLα, and negligible activity against other key enzymes involved in endocannabinoid signaling, including FAAH, MAGL, and ABHD11.<sup>1</sup> KT109 has been shown to disrupt the lipid network involved in macrophage inflammatory responses, lowering 2-AG, as well as arachidonic acid (Item No. 90010) and eicosanoids, in mouse peritoneal macrophages.<sup>1</sup>

### Reference

1. Hsu, K.-L., Tsuboi, K., Adibekian, A., *et al.* DAGLβ inhibition perturbs a lipid network involved in macrophage inflammatory responses. *Nat. Chem. Biol.* **8**(12), 999-1007 (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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