

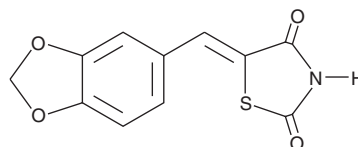
# Product Information



**AS-041164**

Catalog No. 13622

**Formal Name:** 5-[(1,3-benzodioxol-5-yl)methylene]-  
2,4-thiazolidinedione  
**CAS Registry No.:** 1146702-72-8  
**MF:** C<sub>11</sub>H<sub>7</sub>NO<sub>4</sub>S  
**FW:** 249.2  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



## Laboratory Procedures

For long term storage, we suggest that AS-041164 be stored as supplied at -20°C. It should be stable for at least two years.

AS-041164 is supplied as a crystalline solid. A stock solution may be made by dissolving the AS-041164 in the solvent of choice. AS-041164 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of AS-041164 in these solvents is approximately 25 mg/ml.

AS-041164 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AS-041164 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. AS-041164 has a solubility of approximately 0.1 mg/ml in a 1:9 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The phosphatidylinositol 3-kinases (PI3Ks) are lipid and protein kinases involved in diverse biological processes, including cell growth, migration, and metabolism.<sup>1</sup> AS-041164 is a potent inhibitor of PI3K with selectivity for the class IB isoform PI3K $\gamma$  (IC<sub>50</sub> = 70 nM), compared to PI3K $\alpha$  (IC<sub>50</sub> = 240 nM), PI3K $\beta$  (IC<sub>50</sub> = 1.45  $\mu$ M), and PI3K $\delta$  (IC<sub>50</sub> = 1.70  $\mu$ M).<sup>2</sup> When tested at 1.0  $\mu$ M, it shows little or no activity against 38 other common kinases.<sup>2</sup> When given orally to mice, AS-041164 shows a pharmacokinetic profile that is similar to the general PI3K inhibitor LY294002 but is three times more potent (ED<sub>50</sub> = 27.4 mg/kg for AS-041164 *versus* 81.6 mg/kg for LY294002) in blocking neutrophil recruitment induced by RANTES.<sup>2</sup>

## References

1. Hirsch, E., Ciruolo, E., Ghigo, A., *et al.* Taming the PI3K team to hold inflammation and cancer at bay. *Pharmacology & Therapeutics* **118**, 192-205 (2008).
2. Ferrandi, C., Ardisson, V., Ferro, P., *et al.* Phosphoinositide 3-kinase  $\gamma$  inhibition plays a crucial role in early steps of inflammation by blocking neutrophil recruitment. *JPET* **322**, 923-930 (2007).

## Related Products

NVP-BE2235 - Cat. No. 10565 • AS-252424 - Cat. No. 10009052 • AS-604850 - Cat. No. 10010175

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

## MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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## Cayman Chemical

### Mailing address

1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

### Phone

(800) 364-9897  
(734) 971-3335

### Fax

(734) 971-3640

### E-Mail

custserv@caymanchem.com

### Web

www.caymanchem.com