

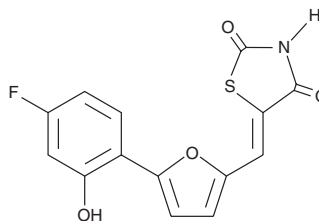
# PRODUCT INFORMATION



**AS-252424**

Item No. 10009052

**CAS Registry No.:** 900515-16-4  
**Formal Name:** 5-[5-(4-fluoro-2-hydroxy-phenyl)-furan-2-ylmethylene]-thiazolidine-2,4-dione  
**MF:** C<sub>14</sub>H<sub>8</sub>FNO<sub>4</sub>S  
**FW:** 305.3  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 408 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Special Conditions:** Light sensitive



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

## Laboratory Procedures

AS-252424 is supplied as a crystalline solid. A stock solution may be made by dissolving the AS-252424 in the solvent of choice, which should be purged with an inert gas. AS-252424 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of AS-252424 in ethanol is approximately 10 mg/ml and approximately 20 mg/ml in DMSO and DMF.

AS-252424 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AS-252424 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AS-252424 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

AS-252424 is an inhibitor of PI3Kγ (IC<sub>50</sub> = 0.03 μM) and long-chain acyl-CoA synthetase 4 (ACSL4).<sup>1,2</sup> It is selective for PI3Kγ over PI3Kα, PI3Kβ, and PI3Kδ (IC<sub>50</sub>s = 0.94, 20, and 20 μM, respectively) but also inhibits casein kinase 2 (CK2; IC<sub>50</sub> = 0.02 μM). AS-252424 binds to the glutamine in position 464 of ACSL4 and inhibits ACSL4 enzymatic activity.<sup>2</sup> It prevents decreases in viability induced by the ferroptosis inducer RSL3 in wild-type HT-1080 cells (IC<sub>50</sub> = 2.2 μM) but not ACSL4 knockout HT-1080 cells, an effect that can be restored by re-expression of ACSL4. It also prevents RSL3-induced increases in lipid peroxidation in HT-1080 cells. Nanoparticles loaded with AS-252424 reduce inflammation and ferroptosis in an ACSL4-dependent manner in the kidney and liver in mouse models of renal ischemia-reperfusion injury induced by renal pedicle clamping and concanavalin A-induced acute liver injury, respectively. AS-252424 (0.5-2.5 μM) also reduces c-Kit ligand-induced production of leukotriene C<sub>4</sub> (LTC<sub>4</sub>; Item No. 20210) and phosphorylation of cytosolic phospholipase A<sub>2</sub> (cPLA<sub>2</sub>), JNK, and p38 MAPK in primary mouse bone marrow-derived mast cells.<sup>3</sup> However, it increases airway hyperresponsiveness and airway smooth muscle thickening in a mouse model of toluene diisocyanate-induced asthma when administered at a dose of 10 mg/kg.<sup>4</sup>

## References

1. Pomel, V., Klicic, J., Covini, D., et al. 3-kinase γ. *J. Med. Chem.* **49**(13), 3857-3871 (2006).
2. Huang, Q., Ru, Y., Luo, Y., et al. *Sci. Adv.* **10**(13), eadk1200 (2024).
3. Jin, M., Zhou, Q., Lee, E., et al. *Inflammation* **37**(4), 1254-1260 (2014).
4. Xu, C., Chen, S., Deng, Y., et al. *Toxicology* **454**, 152747 (2021).

### 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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