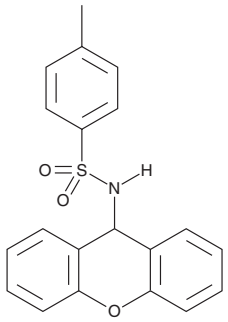
PRODUCT INFORMATION

AH 7614

Item No. 17713

CAS Registry No.:	6326-06-3
Formal Name:	4-methyl-N-9H-xanthen-9-yl-benzenesulfonamide
Synonyms:	NSC 31171, N-xanthen-9-yl-*p*-Toluenesulfonamide
MF:	$C_{20}H_{17}NO_3S$
FW:	351.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 290 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

AH 7614 is supplied as a crystalline solid. A stock solution may be made by dissolving the AH 7614 in the solvent of choice. AH 7614 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of AH 7614 in these solvents is approximately 30 mg/ml.

AH 7614 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AH 7614 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AH 7614 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

Free fatty acid receptor 4 (FFAR4/GPR120) is a G protein-coupled receptor expressed in intestine, adipocytes, and pro-inflammatory macrophages that is activated by long chain free fatty acids.[1,2] ω-3 Fatty acids, such as docosahexaenoic acid (Item No. 90310) and eicosapentaenoic acid (Item No. 90110), initiate FFAR4 signaling, resulting in inhibition of toll-like receptor and TNF-α inflammatory signaling pathways in a β-arrestin2/TAB1 dependent manner.[2] AH 7614 is a selective FFAR4 antagonist (IC_{50}s = 0.079 and 25 µM for human FFAR4 and FFAR1 receptors, respectively).[3] In U2OS osteosarcoma cells expressing the FFAR4 receptor, it has been shown to inhibit intracellular calcium accumulation induced by either linoleic acid or an FFAR4 agonist.[3]

References

1. Davenport, A.P., Alexander, S.P.H., Sharman, J.L., *et al.* International Union of Basic and Clinical Pharmacology. LXXXVIII. G protein-coupled receptor list: Recommendations for new pairings with cognate ligands. *Pharmacol. Rev.* **65(3)**, 967-986 (2013).
2. Oh, D.Y., Talukdar, S., Bae, E.J., *et al.* GPR120 is an omega-3 fatty acid receptor mediating potent anti-inflammatory and insulin sensitizing effects. *Cell* **142(5)**, 687-698 (2010).
3. Sparks, S.M., Chen, G., Collins, J.L., *et al.* Identification of diarylsulfonamides as agonists of the free fatty acid receptor 4 (FFA4/GPR120). *Bioorg. Med. Chem. Lett.* **24(14)**, 3100-3103 (2014).

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