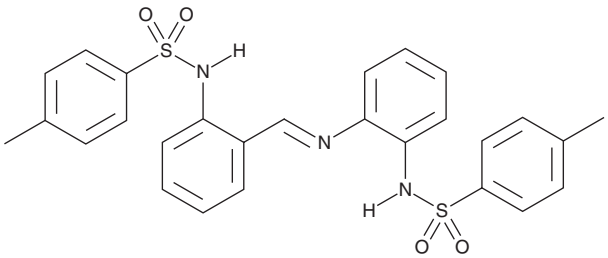
PRODUCT INFORMATION

MP-A08

Item No. 21903

CAS Registry No.:	219832-49-2
Formal Name:	4-methyl-N-[2-[[[2-[[(4-methylphenyl) sulfonyl]amino]phenyl]imino]methyl]phenyl]-benzenesulfonamide
Synonym:	NSC 122314
MF:	$C_{27}H_{25}N_3O_4S_2$
FW:	519.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 225 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

MP-A08 is supplied as a crystalline solid. A stock solution may be made by dissolving the MP-A08 in the solvent of choice. MP-A08 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of MP-A08 in these solvents is approximately 12 and 33 mg/ml, respectively.

MP-A08 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MP-A08 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. MP-A08 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

MP-A08 is an ATP-competitive inhibitor of sphingosine kinases SPHK1 and SPHK2 (K_is = 27 and 6.9 µM, respectively).[1] It is selective for SPHK1/2 over a panel of 140 human protein kinases at concentrations up to 25 µM. MP-A08 (15 µM) reduces generation of cellular sphingosine-1-phosphate (S1P; Item No. 62570) without inducing degradation of SPHK1 in Jurkat cells. It induces a 3.7-, 3.5-, and 5.8-fold increase in C-18 ceramide (Item No. 19556), C-20 ceramide (Item No. 10724), and C20:1-ceramide levels, respectively, and dose-dependently activates the apoptosis-associated p38 and JNK pathways *in vitro*. MP-A08 reduces proliferation of a variety of human cancer cell lines (EC_{50}s = 8-44.9 µM). MP-A08 also reduces tumor vasculature, as determined by CD31 staining, and volume as well as S1P protein levels in A549 human lung adenocarcinoma xenografts in mice.

Reference

1. Pitman, M.R., Powell, J.A., Coolen, C., *et al.* A selective ATP-competitive sphingosine kinase inhibitor demonstrates anti-cancer properties. *Oncotarget* **6(9)**, 7065-7083 (2015).

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