# **PRODUCT** INFORMATION



## Dapsone

Item No. 23743

CAS Registry No.:	80-08-0
Formal Name:	4,4'-sulfonylbis-benzenamine
Synonyms:	4,4'-Diaminodiphenyl sulfone, O, O
	NSC 6091
MF:	$C_{12}H_{12}N_2O_2S$
FW:	248.3
Purity:	≥98%
UV/Vis.:	$\lambda_{max}$ : 261, 296 nm
Supplied as:	A 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

Dapsone is supplied as a solid. A stock solution may be made by dissolving the dapsone in the solvent of choice, which should be purged with an inert gas. Dapsone is slightly soluble in methanol and DMSO.

### Description

Dapsone is an anti-inflammatory, antimalarial, and antibacterial compound.<sup>1</sup> In vivo, dapsone (34 μg/animal per day) reduces epidermal hyperproliferation and epithelial thickness in the esophagus in a mouse model of proliferative dermatitis.<sup>2</sup> It reduces lipid peroxidation, myeloperoxidase activity, and cellular apoptosis in the striatum of rats following ischemia and reperfusion injury.<sup>3</sup> Dapsone reduces growth of M. leprae in the footpad of mice (MIC = 0.01-0.03 µg/ml in sera) and induces clearance of P. knowlesi infections in macaques.<sup>4,5</sup> It also reduces the number of *P. gallinaceum* sporozoites in a mosquito population allowed to feed on dapsone-treated chicks.<sup>5</sup> Formulations containing dapsone have been used in the treatment of malaria, acne, dermatitis, and leprosy.

### References

- 1. Bonde, S.L., Bhadane, R.P., Gaikwad, A., et al. Simultaneous determination of Dapsone and its major metabolite N-acetyl Dapsone by LC-MS/MS method. Int. J. Pharm. Pharm. Sci. 5(Suppl 3), 441-446 (2013).
- 2. Gijbels, M.J., Elliott, G.R., HogenEsch, H., et al. Therapeutic interventions in mice with chronic proliferative dermatitis (cpdm/cpdm). Exp. Dermatol. 9(5), 351-358 (2000).
- Diaz-Ruiz, A., Zavala, C., Montes, S., et al. Antioxidant, antiinflammatory and antiapoptotic effects of 3 dapsone in a model of brain ischemia/reperfusion in rats. J. Neurosci. Res. 86(15), 3410-3419 (2008).
- 4. Holmes, I.B. and Hilson, G.R. The effect of rifampicin and dapsone on experimental Mycobacterium leprae infections: Minimum inhibitory concentrations and bactericidal action. J. Med. Microbiol. 5(2), 251-261 (1972).
- 5. Ramakrishnan, S.P., Basu, P.C., Singh, H., et al. Studies on the toxicity and action of diaminodiphenylsulfone (DDS) in avian and simian malaria. Bull. World Health Organ. 27(2), 213-221 (1962).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFFTY 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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