
Product Data Sheet

Product Name: Dimethyl fumarate D6

Cat. No.: GC62936

Chemical Properties

Cas. No. 66487-95-4

Formula $C_6H_2D_6O_4$

M.Wt 150.16

Solubility DMF : ≥ 10 mg/mL (66.60 mM); DMSO : ≥ 5 mg/mL (33.30 mM); Ethanol : ≥ 2 mg/mL (13.32 mM); DMF:PBS(pH 7.2) (1:1) : ≥ 0.5 mg/mL (3.33 mM) Storage

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Dimethyl fumarate D6 is a deuterium labeled Dimethyl fumarate. Dimethyl fumarate is a nuclear factor (erythroid-derived)-like 2 (Nrf2) pathway activator and induces upregulation of antioxidant gene expression[1][2][3][4][5][6].

[1]. Albrecht P, et al. Effects of dimethyl fumarate on neuroprotection and immunomodulation. J Neuroinflammation. 2012 Jul 7;9:163.

[2]. Peng H, et al. Dimethyl fumarate inhibits dendritic cell maturation via nuclear factor κ B (NF- κ B) and extracellular signal-regulated kinase 1 and 2 (ERK1/2) and mitogen stress-activated kinase 1 (MSK1) signaling. J Biol Chem. 2012 Aug 10;287(33):28017-26.

[3]. Meili-Butz S, et al. Dimethyl fumarate, a small molecule drug for psoriasis, inhibits Nuclear Factor-kappaB and reduces myocardial infarct size in rats. Eur J Pharmacol. 2008 May 31;586(1-3):251-8.

[4]. Cross SA, et al. Dimethyl fumarate, an immune modulator and inducer of the antioxidant response, suppresses HIV replication and macrophage-mediated neurotoxicity: a novel candidate for HIV neuroprotection. J Immunol. 2011 Nov 15;187(10):5015-25.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

[5]. Jing X, et al. Dimethyl fumarate attenuates 6-OHDA-induced neurotoxicity in SH-SY5Y cells and in animal model of Parkinson's disease by enhancing Nrf2 activity. Neuroscience. 2015 Feb 12;286:131-40.

[6]. Li Y, et al. Dimethyl fumarate accelerates wound healing under diabetic condition. J Mol Endocrinol. 2018 Jul 23. pii: JME-18-0102.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA