



LKT Laboratories, Inc.

Dimethyl Fumarate

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Product Information

Product ID D3448

CAS No. 624-49-7

Chemical Name

Synonym BG-12

Formula C₆H₈O₄

Formula Wt. 144.13

Melting Point 102-104 °C

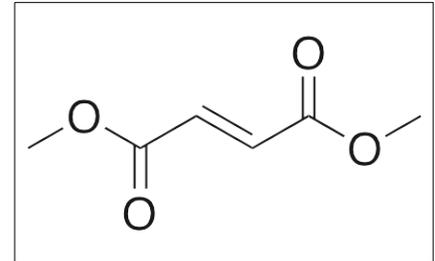
Purity ≥98%

Solubility Soluble in water (1.6 mg/ml at 20° C), methanol (30-36 mg/ml), ethanol (10 mg/ml at 25° C), DMSO (29 mg/ml at 25° C), and DMF (~12 mg/ml)

Store Temp Ambient

Ship Temp Ambient

Description Dimethyl fumarate is a fumaric acid methyl ester that is clinically used to treat psoriasis and under investigation as a potential treatment for multiple sclerosis (MS). Dimethyl fumarate exhibits immunomodulatory, antioxidative, and anti-inflammatory activities. In vitro, dimethyl fumarate increases expression of heme oxygenase 1 (HO-1) and Nrf2 and decreases proliferation of T cells and release of inflammatory cytokines. Dimethyl fumarate activates nicotinic acetylcholine receptors (nAChRs), although the relevance of this activity is unknown. Previously, this compound has been used as a radiosensitizer. Recently, dimethyl fumarate has displayed efficacy in models of multiple sclerosis, decreasing relapse and improving neurologic outcomes.



Bulk quantities available upon request

Product ID	Size
D3448	25 g
D3448	100 g
D3448	250 g

References Fox RJ, Miller DH, Phillips JT, et al. Placebo-controlled phase 3 study of oral BG-12 or glatiramer in multiple sclerosis. *N Engl J Med.* 2012 Sep 20;367(12):1087-97. Erratum in: *N Engl J Med.* 2012 Oct 25;367(17):1673. PMID: 22992072.

Scannevin RH, Chollate S, Jung MY, et al. Fumarates promote cytoprotection of central nervous system cells against oxidative stress via the nuclear factor (erythroid-derived 2)-like 2 pathway. *J Pharmacol Exp Ther.* 2012 Apr;341(1):274-84. PMID: 22267202.

Lehmann JC, Listopad JJ, Rentzsch CU, et al. Dimethylfumarate induces immunosuppression via glutathione depletion and subsequent induction of heme oxygenase 1. *J Invest Dermatol.* 2007 Apr;127(4):835-45. PMID: 17235328.

Held KD, Epp ER, Clark EP, et al. Effect of dimethyl fumarate on the radiation sensitivity of mammalian cells in vitro. *Radiat Res.* 1988 Sep;115(3):495-502. PMID: 3174933.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.