LKT Laboratories, Inc.

Pemetrexed Disodium

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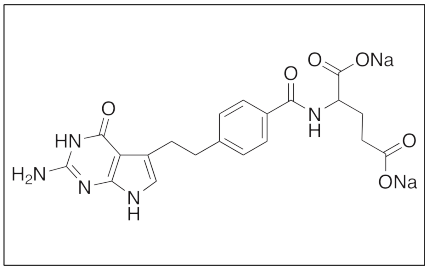
Product Information

Product ID P1849
CAS No. 150399-23-8
Chemical Name

Synonym

Formula $C_{20}H_{19}N_5Na_2O_6$
Formula Wt. 471.37
Melting Point
Purity ≥98%
Solubility Water



Bulk quanitites available upon request

Product ID	Size
P1849	10 mg
P1849	100 mg
P1849	250 mg
P1849	1 g

Store Temp 4˚C
Ship Temp Ambient

Description Pemetrexed is an antifolate anticancer chemotherapeutic that inhibits thymidylate synthase. Pemetrexed is currently in clinical trials as a potential treatment for ovarian cancer and lung adenocarcinoma. Pemetrexed may also inhibit other enzymes involved in folate metabolism, including serine hydroxymethyltransferase (SHMT), dihydrofolate reductase (DHFR), and glycinamide ribonucleotide formyltransferase (GARFT). In vitro, Pemetrexed induces activation of caspases 2, 3, 8, and 9 and increases levels of Bax, Fas, death receptor 4 (DR4), and death receptor 5 (DR5), resulting in caspase-mediated apoptosis.

References

Walters CL, Arend RC, Armstrong DK, et al. Folate and folate receptor alpha antagonists mechanism of action in ovarian cancer. Gynecol Oncol. 2013 Nov;131(2):493-8. PMID: 23863359.

Lau DH, Moon J, Davies AM, et al. Southwestern oncology group phase II trial (S0526) of pemetrexed in bronchioloalveolar carcinoma subtypes of advanced adenocarcinoma. Clin Lung Cancer. 2013 Jul;14(4):351-5. PMID: 23415808.

Yang TY, Chang GC, Chen KC, et al. Pemetrexed induces both intrinsic and extrinsic apoptosis through ataxia telangiectasia mutated/p53-dependent and -independent signaling pathways. Mol Carcinog. 2013 Mar;52(3):183-94. PMID: 22086658.

Su L, Liu G, Hao X, et al. Death receptor 5 and cellular FLICE-inhibitory protein regulate pemetrexed-induced apoptosis in human lung cancer cells. Eur J Cancer. 2011 Nov;47(16):2471-8. PMID: 21726997.

Daidone F, Florio R, Rinaldo S, et al. In silico and in vitro validation of serine hydroxymethyltransferase as a chemotherapeutic target of the antifolate drug pemetrexed. Eur J Med Chem. 2011 May;46(5):1616-21. PMID: 21371789.

Joerger M, Omlin A, Cerny T, et al. The role of pemetrexed in advanced non small-cell lung cancer: special focus on pharmacology and mechanism of action. Curr Drug Targets. 2010 Jan;11(1):37-47. PMID: 19839929.

Blackwood E, Epler J, Yen I, et al. Combination drug scheduling defines a “window of opportunity” for