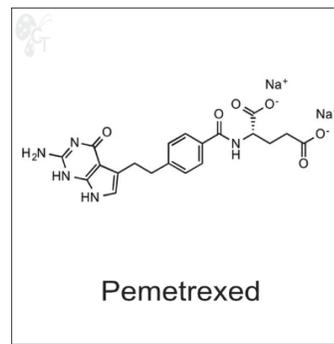




Product Specification Sheet

Product Name: Pemetrexed (LY-231514)

Catalog Number: C5923



Technical information:

Chemical Formula: C₂₀H₁₉N₅Na₂O₆

CAS #: 150399-23-8

Molecular Weight: 471.37

Purity: > 98%

Appearance: White solid

Solubility: Soluble in DMSO up to 100 mM

Chemical Name: sodium (S)-2-(4-(2-(2-amino-4-oxo-4,7-dihydro-1H-pyrrolo[2,3-d]pyrimidin-5-yl)ethyl)benzamido)pentanedioate

Storage: For longer shelf life, store solid powder or DMSO solution at -20°C desiccated.

Shelf Life: In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.

- Handling:**
- To make 10 mM stock solution, add 0.212 mL of DMSO for each mg of Pemetrexed (LY-231514).
 - For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

Biological Activity: Pemetrexed (LY-231514) is an antifolate that inhibits thymidylate synthase (TS) (K_i = 1.3 nM) and multiple folate-requiring enzymes, such as dihydrofolate reductase (DHFR) (K_i = 7.2 nM) and glycinamide ribonucleotide formyltransferase (GARFT) (K_i = 65 nM). [1] Pemetrexed (LY-231514) has been studied as a potential treatment option in multiple tumor types, and has been approved in 2004 for the treatment of pleural mesothelioma [2] and non-small cell lung cancer (NSCLC) [3]. A recent clinical study reveals that platinum combination with Pemetrexed (LY-231514) significantly improved the disease control rate and resulted in a tendency toward prolongation of progression-free survival in NSCLC patients who progressed after first-line epidermal growth factor receptor tyrosine kinase inhibitors (EGFR TKIs). [4]"

- Reference:**
1. Shih C, et al. LY231514, a pyrrolo[2,3-d]pyrimidine-based antifolate that inhibits multiple folate-requiring enzymes. *Cancer Res.* 1997. 57(6):1116-23. Pubmed ID: 9067281
 2. Hazarika M, et al. FDA drug approval summaries: pemetrexed (Alimta). *Oncologist.* 2004. 9(5):482-8. Pubmed ID: 15477632
 3. Cohen MH, et al. FDA drug approval summary: pemetrexed for injection (Alimta) for the treatment of non-small cell lung cancer. *Oncologist.* 2005. 10(6):363-8. Pubmed ID: 15967829
 4. Lee SJ, et al. Pemetrexed plus platinum versus pemetrexed alone in non-small cell lung cancer patients who have progressed after first-line EGFR TKIs. *Lung Cancer.* 2015. 90(2):261-6. Pubmed ID: 26371700

To reorder: <http://www.cellagentech.com/Pemetrexed-LY-231514/>

For Technical Support: technical@cellagentech.com

Chemicals are sold for research use only, not for clinical or diagnostic use.