



Product Information

Product ID A4944
CAS No. 68302-57-8
Chemical Name

Synonym

Formula $C_{16}H_{14}N_2O_4$
Formula Wt. 298.29
Melting Point

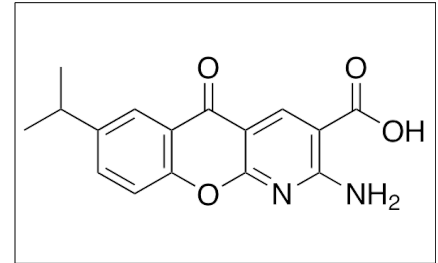
Purity $\geq 98\%$

Solubility Ethanol (0.58 mg/ml),
DMSO (10 mg/ml), DMF (14
mg/ml), and 1:1 DMSO: PBS
(pH 7.2) (0.5 mg/ml)

Store Temp Ambient

Ship Temp Ambient

Description Amlexanox is an azoxanthone derivative that is used to treat recurring aphthous ulcer and asthma. Amlexanox alters cytoskeleton function and inhibits cell migration and proliferation through binding to S100A12 and S100A13 proteins and attenuation of actin stress fiber formation and FGF1 release. Amlexanox may exhibit its anti-allergic activity through inhibition of 5- and 12-lipoxygenase, and also through inhibition of histamine release from mast cells. This compound also displays anti-obesity and anti-diabetic properties through its inhibition of TANK-binding kinase 1 (TBK1) and I κ B kinase (IKK); this activity increases energy expenditure, thermogenesis, and weight loss, and also improves insulin sensitivity.



Bulk quantities available upon request

Product ID	Size
A4944	500 mg
A4944	1 g
A4944	5 g

References Reilly SM, Chiang SH, Decker SJ, et al. An inhibitor of the protein kinases TBK1 and IKK- ϵ improves obesity-related metabolic dysfunctions in mice. *Nat Med.* 2013 Mar;19(3):313-21. PMID: 23396211.

Bell J. Amlexanox for the treatment of recurrent aphthous ulcers. *Clin Drug Investig.* 2005;25(9):555-66. PMID: 17532700.

Landriscina M, Prudovsky I, Mouta Carreira C, et al. Amlexanox reversibly inhibits cell migration and proliferation and induces the Src-dependent disassembly of actin stress fibers in vitro. *J Biol Chem.* 2000 Oct 20;275(42):32753-62. PMID: 10921913.

Shishibori T, Oyama Y, Matsushita O, Yet al. Three distinct anti-allergic drugs, amlexanox, cromolyn and tranilast, bind to S100A12 and S100A13 of the S100 protein family. *Biochem J.* 1999 Mar 15;338 (Pt 3):583-9. PMID: 10051426.

Makino H, Saijo T, Ashida Y, et al. Mechanism of action of an antiallergic agent, amlexanox (AA-673), in inhibiting histamine release from mast cells. Acceleration of cAMP generation and inhibition of phosphodiesterase. *Int Arch Allergy Appl Immunol.* 1987;82(1):66-71. PMID: 2433225.

Saijo T, Makino H, Tamura S, et al. The antiallergic agent amoxanox suppresses SRS-A generation by inhibiting lipoxygenase. *Int Arch Allergy Appl Immunol.* 1986;79(3):231-7. PMID: 2868995.

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