



LKT Laboratories, Inc.

Ibutilast

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Product Information

Product ID I0480

CAS No. 50847-11-5

Chemical Name

Synonym 3-Isobutyryl-2-isopropylpyrazolo[1,5-a]pyridine, 2-Methyl-1-[2-(1-methylethyl)pyrazolo[1,5-a]pyridin-3-yl]-1-propanone, 2-Isopropyl-3-isobutyrylpyrazolo[1,5-a]pyridine, KC-404, AV-411

Formula C₁₄H₁₈N₂O

Formula Wt. 230.31

Melting Point 53-54 °C

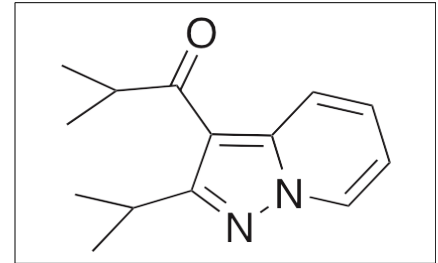
Purity ≥98%

Solubility

Store Temp Ambient

Ship Temp Ambient

Description Ibutilast is an inhibitor of phosphodiesterases 3 and 5 (PDE3/5) that also inhibits the leukotriene D4 (LTD4) receptor in airway smooth muscle cells. Ibutilast exhibits vasodilatory, anti-inflammatory, anti-asthma, anti-platelet, analgesic, and antinociceptive activities. In clinical settings, ibutilast increases cerebral blood flow in several brain regions after ischemic stroke. Ibutilast also non-competitively inhibits the functions of pro-inflammatory macrophage migration inhibitory factor (MIF), preventing glial cell activation. In other cellular models, ibutilast decreases activation of NF-κB, inhibiting HIV-1 Tat-induced production of TNF-α.



Bulk quantities available upon request

Product ID	Size
I0480	10 mg
I0480	25 mg
I0480	100 mg

References Inoue N, Fukuda S, Inada T, et al. Effect of ibutilast on the reciprocal inhibitory visual-vestibular interaction closely related to dizziness after cerebral ischemia. *J Stroke Cerebrovasc Dis.* 2014 Jan;23(1):51-5. PMID: 23085301.

Kiebala M, Maggirwar SB. Ibutilast, a pharmacologic phosphodiesterase inhibitor, prevents human immunodeficiency virus-1 Tat-mediated activation of microglial cells. *PLoS One.* 2011 Apr 8;6(4):e18633. PMID: 21494611.

Cho Y, Crichlow GV, Vermeire JJ, et al. Allosteric inhibition of macrophage migration inhibitory factor revealed by ibutilast. *Proc Natl Acad Sci U S A.* 2010 Jun 22;107(25):11313-8. PMID: 20534506.

Ledeboer A, Hutchinson MR, Watkins LR, et al. Ibutilast (AV-411). A new class therapeutic candidate for neuropathic pain and opioid withdrawal syndromes. *Expert Opin Investig Drugs.* 2007 Jul;16(7):935-50. PMID: 17594181.

Kishi Y, Ohta S, Kasuya N, et al. Ibutilast modulates platelet-endothelium interaction mainly through cyclic GMP-dependent mechanism. *J Cardiovasc Pharmacol.* 2000 Jul;36(1):65-70. PMID: 10892662.

Ohashi M, Kanai R, Nishino K, et al. Antagonistic effect of KC-404, a new anti-asthmatic agent, on leukotriene D4-induced contractile responses in isolated guinea pig smooth muscles. *Prostaglandins.* 1986 Dec;32(6):875-88. PMID: 3562868.

Ohashi M, Ohkubo H, Kito J, et al. A new vasodilator 3-isobutyryl-2-isopropylpyrazolo[1,5-a]pyridine (KC-404) has a

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