

Catalog # 10-2236

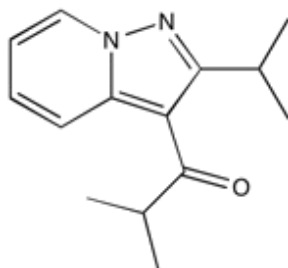
Ibudilast

CAS# 50847-11-5

3-Isobutryl-2-isopropylpyrazolo[1,5-a]pyridine
2-Methyl-1-[2-(1-methylethyl)pyrazolo[1,5-a]pyridine-3-yl] 1-propanone

KC-404, AV411

Lot # X101671



Phosphodiesterase inhibitor with some selectivity for PDE4 and 5. (IC₅₀s= 53, 35, 48,12 and 10 μM for PDE 1a, 2, 3, 4 and 5 respectively¹). Acts as a cerebral vasodilator by selectively inducing a cGMP-independent relaxation of the intracranial vertebrobasilar artery.² Attenuates neuroinflammation and enhances retinal ganglion cell viability in glaucoma via PKA signaling.³ A glial cell activation inhibitor.⁴ Enhances morphine analgesia and attenuates tolerance and withdrawal.⁵ Orally active and crosses the blood-brain barrier.⁵

- 1) Kishi *et al.* (2001), *Ibudilast: a mom-selective PDE inhibitor with multiple actions on blood cells and the vascular wall*; Cardiovasc. Drug Rev., **19** 215
- 2) Yamazaki *et al.* (2011), *Ibudilast. A mixed PDE3/4 inhibitor, causes a selective and nitric oxide/cGMP-independent relaxation of the intracranial vertebrobasilar artery*; Eur. J. Pharmacol., **650** 605
- 3) Cueva Vargas *et al.* (2016), *The glial cell modulator ibudilast attenuates neuroinflammation and enhances retinal ganglion cell viability in glaucoma through protein kinase A signaling.*; Neurobiol. Dis., **93** 156
- 4) Mizuno *et al.* (2004), *Neuroprotective role of phosphodiesterase inhibitor ibudilast on neuronal cell death induced by activated microglia*; Neuropharmacology, **46** 404
- 5) Ledebøer *et al.* (2007), *Ibudilast (AV-411). A class therapeutic candidate for neuropathic pain and opioid withdrawal syndromes*; Expert. Opin. Investig. Drugs, **16** 935

PHYSICAL DATA

Molecular Weight:	230.31
Molecular Formula:	C ₁₄ H ₁₈ N ₂ O
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	Soluble in DMSO (up to 25 mg/ml) or in Ethanol (up to 20 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied, desiccated at room temperature for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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