



LKT Laboratories, Inc.

## Isoflurane

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### Product Information

Product ID I7258

CAS No. 26675-46-7

Chemical Name

Synonym

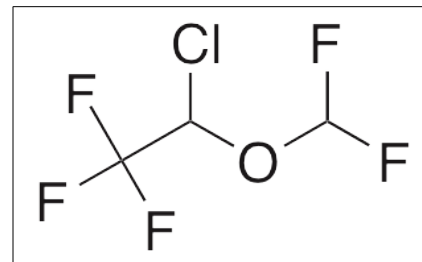
Formula  $C_3H_2ClF_5O$

Formula Wt. 184.49

Melting Point

Purity  $\geq 98\%$

Solubility Soluble in water (4.47 mg/ml at 37 °C), and organic liquids including fats and oils



**Bulk quantities available upon request**

Product ID	Size
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I7258	250 mg
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I7258	1 g
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Store Temp Ambient

Ship Temp Ambient

**Description** Isoflurane is an anesthetic most commonly used in veterinary medicine. Isoflurane exhibits cardiomodulatory, neuromodulatory, and pro-inflammatory activities. In diabetic rats, isoflurane decreases cardiac force and intracellular  $Ca^{2+}$  amplitude. Isoflurane also increases IL-6 and NF- $\kappa$ B levels in glioma cells and microglia. In other cellular models, isoflurane inhibits L-type voltage-gated  $Ca^{2+}$  channel currents at resting membrane potential. Additionally, isoflurane binds and modulates signaling by ATP synthase and NADH dehydrogenase. Isoflurane also inhibits delayed rectifier and A-type  $K^{+}$  channels and NMDA receptors, activates  $Ca^{2+}$  ATPase and ATP-sensitive  $K^{+}$  channels, and potentiates GABA-A and glycine (GlyR) receptors.

**References** Shen X, Bhatt N, Xu J, et al. Effect of isoflurane on myocardial energetic and oxidative stress in cardiac muscle from Zucker diabetic Fatty rat. J Pharmacol Exp Ther. 2014 Apr;349(1):21-8. PMID: 24431470.

Fanchaouy M, Cubano L, Maldonado H, et al. PKC independent inhibition of voltage gated calcium channels by volatile anesthetics in freshly isolated vascular myocytes from the aorta. Cell Calcium. 2013 Oct;54(4):257-65. PMID: 23948226.

Zhang L, Zhang J, Yang L, et al. Isoflurane and sevoflurane increase interleukin-6 levels through the nuclear factor-kappa B pathway in neuroglioma cells. Br J Anaesth. 2013 Jun;110 Suppl 1:i82-91. PMID: 23604542.

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