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## Product Data Sheet

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Product Name: Piriprost (potassium salt)

Cat. No.: GC16046

### Chemical Properties

Cas. No. 88851-62-1

Chemical Name 1,4(R),5(R),6-tetrahydro-5-hydroxy-4-[(1E,3S)-3-hydroxy-1-octenyl]-1-phenyl-cyclopenta[b]pyrrole-2-pentanoic acid, monopotassium salt

SMILES CCCCC[C@H](O)/C=C/[C@H]1[C@H](O)CC2=C1C=C(CCCCC([O-])=O)N2C3=CC=CC=C3.[K+]Formula  $C_{26}H_{34}NO_4 \cdot K$ 

M.Wt 463.7

Solubility  $\leq 43\text{mg/ml}$  in ethanol;  $30\text{mg/ml}$  in DMSO;  $8.6\text{mg/ml}$  in dimethyl formamideStorage Store at  $-20^\circ\text{C}$ General tips For obtaining a higher solubility, please warm the tube at  $37^\circ\text{C}$  and shake it in the ultrasonic bath for a while. Stock solution can be stored below  $-20^\circ\text{C}$  for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure 

### Background

Piriprost (U 60257) is a leukotriene synthesis inhibitor [1].

Leukotrienes belong to a family of eicosanoid inflammatory mediators produced in leukocytes. Leukotrienes mainly act on a subfamily of G protein-coupled receptors. The production of leukotrienes is implicated in triggering contractions in the smooth muscles lining the bronchioles and is a major cause of inflammation in asthma and allergic rhinitis [2].

Piriprost inhibited the formation of 5-hydroxyeicosatetraenoic acid (5-HETE), LTB<sub>4</sub>, and the sulfidopeptide leukotrienes with the IC<sub>50</sub> values ranged from 9 to 14  $\mu\text{M}$  for the mouse mast cells and 15-50  $\mu\text{M}$  for the basophil leukemia cells. Piriprost weakly inhibited the solubilized LTC synthase of rat basophil leukemia cells with the IC<sub>50</sub> of 1.5 mM [1].

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Piriprost increased alkaline phosphatase (ALP) activity in cultured endometrial stromal cells. Piriprost (100  $\mu$ M) inhibited 5-lipoxygenase activity and decreased 5-hydroxy-eicosatetraenoic acid (a 5-lipoxygenase product) by 53% [3].

In smoke-exposed rabbits, pretreatment with piriprost attenuated the smoke-induced increase in alveolar-capillary barrier permeability and decrease in plasminogen activator activity and causes a swelling of type I alveolar epithelium [4].

### References:

- [1] Bach M K, Brashler J R, White G J, et al. Experiments on the mode of action of piriprost (U-60,257), an inhibitor of leukotriene formation in cloned mouse mast cells and in rat basophil leukemia cells[J]. *Biochemical pharmacology*, 1987, 36(9): 1461-1466.
- [2] Smith M J H, Ford-Hutchinson A W, Bray M A. Leukotriene B: a potential mediator of inflammation[J]. *Journal of Pharmacy and Pharmacology*, 1980, 32(1): 517-518.
- [3] Cejic S S, Kennedy T G. Examination of the effects of piriprost (U-60,257 B) on alkaline phosphatase activity of rat endometrial stromal cells in vitro[J]. *Prostaglandins*, 1991, 42(2): 179-189.
- [4] itten M L, Grad R, Quan S F, et al. Piriprost pretreatment attenuates the smoke-induced increase in 99mTcDTPA lung clearance[J]. *Experimental lung research*, 1990, 16(4): 339-353.

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