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**Product Data Sheet**

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Product Name: 2-Ethyl-5,7-dimethyl-3H-imidazo[4,5-b]pyridine

Cat. No.: GC14445

**Chemical Properties**

Cas. No. 133240-06-9

Chemical Name 2-ethyl-5,7-dimethyl-3H-imidazo[4,5-b]pyridine

SMILES CC1=CC(C)=C2C(N1)=NC(CC)=N2Formula  $C_{10}H_{13}N_3$  M.Wt 175.2Solubility  $\geq 5.3\text{mg/mL}$  in DMSO Storage 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**

2-Ethyl-5,7-dimethyl-3H-imidazo[4,5-b]pyridine is a nonpeptidic angiotensin II receptor antagonist.

Angiotensin II is the critical pressor substance of the renin-angiotensin system (RAS). The angiotensin II system, a proteolytic cascade regulating hemodynamics and water and electrolyte balance, is able to contribute to hypertensive states in human. The effects of the octapeptide angiotensin I1 includes cardiac stimulation, vasoconstriction, stimulation of aldosterone synthesis and release, as well as renal reabsorption of sodium.

In vitro: In a previous study, 2-ethyl-5,7-dimethyl-3H-imidazo[4,5-b]pyridine was synthesized by reduction of 2-amino-3-nitropyridine derivatives to the corresponding diaminopyridine which was then condensed with an appropriate carboxylic acid in polyphosphoric acid. In vitro activity study showed that 2-Ethyl-5,7-dimethyl-3H-imidazo[4,5-b]pyridine was a nonpeptidic angiotensin II receptor antagonist whose

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

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imidazo[4,5-b]pyridine scaffold had been used to examine plenty of positional substitutions in the development of orally active, long duration antihypertensive agents [1].

In vivo: Up to now, there is no animal in vivo data reported.

Clinical trial: So far, no clinical study has been conducted.

Reference:

[1] Mantlo, N. B., Chakravarty, P.K., Ondeyka, D.L., et al. Potent, orally active Imadazo[4,5-b]pyridine-based angiotensin II receptor antagonists. Journal of Medicinal Chemistry 34(9), 2919-2922 (1991).

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