

Product Data Sheet

Product Name: IRAK inhibitor 1

Cat. No.: GC17158

Chemical Properties

Cas. No. 1042224-63-4

Chemical Name 6-imidazo[1,2-a]pyridin-3-yl-N-piperidin-4-ylpyridin-2-amine

SMILES C1CNCCC1NC2=CC=CC(=N2)C3=CN=C4N3C=CC=C4

Formula $C_{17}H_{19}N_5$ M.Wt 293.37

Solubility DMSO : 16.67 mg/mL (56.82 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°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.

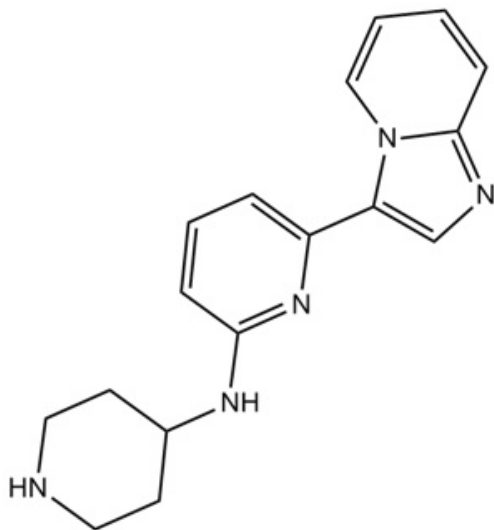
Caution: Product has not been fully validated for medical applications. For research use only.

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Structure



Background

IC50: 35 nM for IRAK-4

The interleukin-1 receptor associated kinase (IRAK) family is comprised of four family members IRAK-1, IRAK-2, IRAK-3/M, and IRAK-4. Upon activation of their upstream cognate receptors, IRAK-4 is thought to phosphorylate IRAK-1 resulting in the activation and autophosphorylation of IRAK-1 and subsequent phosphorylation of downstream substrates. IRAK inhibitor 1 is an inhibitor of interleukin-1 receptor associated kinase 4 (IRAK-4).

In vitro: The regioisomeric pyridines IRAK inhibitor 1 (6) and its analogue (7) showed contrasting SAR, with the 2,6-pyridine isomer IRAK inhibitor 1 having low-nanomolar potency whilst the 2,4-pyridine isomer 7 showed little activity, despite having a more accessible bidentate-binding motif. At 10 μ M,

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IRAK inhibitor 1 was found to have 39% inhibition for JNK-1 and 15% inhibition for JNK-2, respectively [1].

In vivo: No animal in-vivo data available currently IRAK inhibitor 1 and its analogues.

Clinical trial: IRAK inhibitor 1 is currently in the preclinical development stage and no clinical data are available.

Reference:

[1] Buckley GM, Ceska TA, Fraser JL, Gowers L, Groom CR, Higuieruelo AP, Jenkins K, Mack SR, Morgan T, Parry DM, Pitt WR, Rausch O, Richard MD, Sabin V. IRAK-4 inhibitors. Part II: a structure-based assessment of imidazo[1,2-a]pyridine binding. Bioorg Med Chem Lett. 2008;18(11):3291-5.

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