

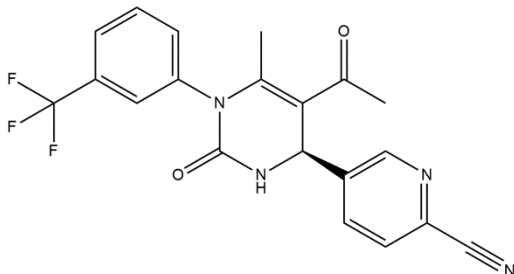
# BAY-678

07/20

**ALTERNATE NAMES:** 5-[(6R)-5-acetyl-4-methyl-2-oxo-3-[3-(trifluoromethyl)phenyl]-1,6-dihydropyrimidin-6-yl]pyridine-2-carbonitrile; (R)-5-(5-Acetyl-6-methyl-2-oxo-1-(3-(trifluoromethyl)phenyl)-1,2,3,4-tetrahydropyrimidin-4-yl)picolinonitrile; 5-[(4R)-5-Acetyl-1,2,3,4-tetrahydro-6-methyl-2-oxo-1-[3-(trifluoromethyl)phenyl]-4-pyrimidinyl]-2-pyridinecarbonitrile

**CATALOG #:** B3061-5 5 mg  
B3061-25 25 mg

**STRUCTURE:**



**MOLECULAR FORMULA:** C<sub>20</sub>H<sub>15</sub>F<sub>3</sub>N<sub>4</sub>O<sub>2</sub>

**MOLECULAR WEIGHT:** 400.35

**CAS NUMBER:** 675103-36-3

**APPEARANCE:** Yellow solid

**PURITY:** ≥98%

**SOLUBILITY:** ~20 mg/ml in DMSO

**DESCRIPTION:** BAY-678 is a potent, selective, cell-permeable inhibitor of human neutrophil elastase (HNE). The activity of HNE is increased in inflammatory diseases. BAY-678 shows K<sub>i</sub> values of 15 nM and 600 nM for human and rat neutrophil elastase respectively and IC<sub>50</sub> of 20 nM *in vitro*. It shows beneficial pulmonary hemodynamic and vascular effects in animal models of pulmonary arterial hypertension. The S-enantiomer BAY-677 is a negative control for BAY-678.

**STORAGE TEMPERATURE:** -20°C

**HANDLING:** Do not take internally. Wear gloves and mask when handling the product! Avoid contact by all modes of exposure.

**REFERENCES:**

1. von Nussbaum, F., Li, V. M.-J., Allerheiligen, S., et al. Freezing the Bioactive Conformation to Boost Potency: The Identification of BAY 85-8501, a Selective and Potent Inhibitor of Human Neutrophil Elastase for Pulmonary Diseases. *Chem. Med. Chem.*, 10, 1163 – 1173 (2015).
2. von Nussbaum, F., Li, V. M.-J. Neutrophil elastase inhibitors for the treatment of (cardio) pulmonary diseases: Into clinical testing with pre-adaptive pharmacophores. *Bioorganic & Medicinal Chemistry Letters* 25 4370–4381 (2015).

**RELATED PRODUCTS:**

BAY-677 (Cat. No. B3060)  
 Elastase Inhibitor (Cat. No. 1922)  
 Alvelestat (Cat. No. B1653)  
 Elastase Inhibitor, SPCK (Cat. No. 1921)  
 Sivelestat (Cat. No. B2144)

**DISCLAIMER:** **FOR RESEARCH USE ONLY! Not to be used on humans.**