



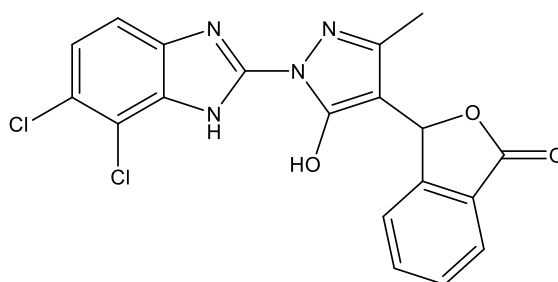
Catalog #10-4140

RU.521

CAS# 2262452-06-0

3-[1-(6,7-Dichloro-1H-benzimidazol-2-yl)-5-hydroxy-3-methylpyrazol-4-yl]-3H-isobenzofuran-1-one; RU0320521

Lot # FBA6142



RU.521 is an inhibitor of cyclic GMP-AMP synthase (cGAS), an important innate immune system sensor of foreign cytoplasmic double-stranded DNA.^{1,2} IC₅₀ = 0.70 μ M in dsDNA-stimulated RAW macrophages¹ and ~0.80 μ M in wild type human THP-1 cells². It is selective for cGAS with no targeting of IFNB1 protein, interferon receptors, or downstream signaling components of the JAK/STAT pathway. RU.521 was able to significantly increase cardiac output in a mouse model of sepsis.³ Active in both mouse and human cell lines.

- 1) Vincent *et al.* (2017), *Small molecule inhibition of cGAS reduces interferon expression in primary macrophages from autoimmune mice*; Nat. Commun. **8** 750
- 2) Wiser *et al.* (2020), *Small molecule inhibition of human cGAS reduces total cGAMP output and cytokine expression in cells*; Sci. Rep. **10** 7604
- 3) Xu *et al.* (2020), *Small molecule inhibition of cyclic GMP-AMP synthase ameliorates sepsis-induced cardiac dysfunction in mice*; Life Sci. **260** 118315

PHYSICAL DATA

Molecular Weight:	415.23
Molecular Formula:	C ₁₉ H ₁₂ Cl ₂ N ₄ O ₃
Purity:	>98% by TLC
	NMR: Conforms
Solubility:	DMSO (>25 mg/mL)
Physical Description:	Off-white to pale pink solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 2 months.

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