

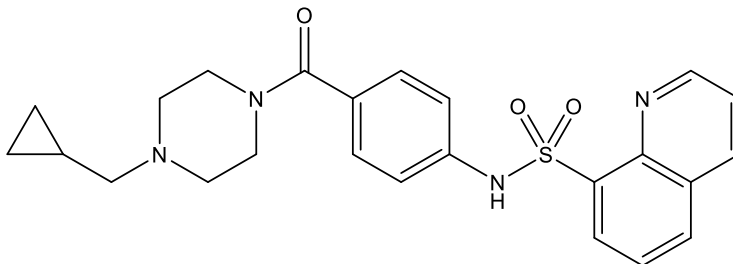
Catalog # 10-4479

Mitapivat

CAS# 1260075-17-9

N-[4-[4-(Cyclopropylmethyl)piperazine-1-carbonyl]phenyl]quinoline-8-sulfonamide; AG-348

Lot # FBA8062



Mitapivat is a potent ($AC_{50} = 29$ nM PKR; 37 nM PKM2; 33 nM PKL) allosteric activator of pyruvate kinase.¹ In clinical use for the treatment of hemolytic anemia² and a potential agent for the treatment for β -thalassemia³ and sickle cell anemia⁴. Pyruvate kinase M2 regulates the rate-limiting step of glycolysis that shifts glucose metabolism from normal respiratory chain to lactate production in tumor cells and is, thus, an important target in cancer cell metabolism.⁵

- 1) Kung *et al.* (2017), *AG-348 enhances pyruvate kinase activity in red blood cells from patients with pyruvate kinase deficiency*; Blood, **130** 1347
- 2) Rab *et al.* (2021), *AG-348 (mitapivat), an allosteric activator of red blood cell pyruvate kinase, increases enzymatic activity, protein stability, and adenosine triphosphate levels over a broad range of PKLR genotypes*; Haematologica, **106** 238
- 3) Matte *et al.* (2021), *The pyruvate kinase activator mitapivat reduces hemolysis and improves anemia in a β -thalassemia mouse model*; J. Clin. Invest., **131** e144206
- 4) Rab *et al.* (2021), *Decreased activity and stability of pyruvate kinase in sickle cell disease: a novel target for mitapivat therapy*; Blood, **137** 2997
- 5) Zahra *et al.* (2020), *Pyruvate Kinase M2 and Cancer: The Role of PKM2 in Promoting Tumorigenesis*; Front. Oncol. **10** 159

PHYSICAL DATA

Molecular Weight:	450.56
Molecular Formula:	C ₂₄ H ₂₆ N ₄ O ₃ S
Purity:	99% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (>50 mg/mL)
Physical Description:	Beige solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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