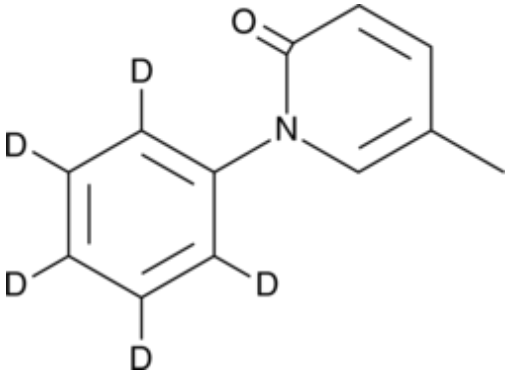
Product Data Sheet

Product Name: Pirfenidone-d5
Cat. No.: GC40197

Chemical Properties

Cas. No.	1020719-62-3		
SMILES	CC(C=C1)=CN(C2=C([2H])C([2H])=C([2H])C([2H])=C2[2H])C1=O		
Formula	C12H6D5NO	M.Wt	190.3
Solubility	DMSO : 100 mg/mL (525.62 mM; ultrasonic and warming and heat to 60°C)	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.		

Structure



Background

Pirfenidone-d5 is intended for use as an internal standard for the quantification of pirfenidone by GC- or LC-MS. Pirfenidone is an orally bioavailable pyridone derivative with antifibrotic, anti-inflammatory, and antioxidant activities. It inhibits TGF-β1-stimulated increases in collagen type I, fibronectin, and Hsp47 expression in A549 lung cancer cells in a concentration-dependent manner. Pirfenidone (300 mg/kg per day) inhibits fibrosis and inhibits increases in collagen content, fibrocyte pool size, and the levels of chemokines CCL2 and CCL12 in lung in a mouse model of pulmonary fibrosis induced by bleomycin . In a mouse model of non-alcoholic steatohepatitis (NASH), pirfenidone inhibits fibrosis

and increases in hepatocyte apoptosis, lobular inflammation, and hepatic expression of the fibrosis-related genes Col1a1, Timp1, Tgfb1, Pdgfb, and Fgf2 when administered at a dose of 280 mg/kg but has no effect on steatosis. Pirfenidone also inhibits NADPH-dependent lipid peroxidation in sheep liver microsomes and scavenges hydroxyl radicals (IC50s = ~6 and ~2.5 mM, respectively). Formulations containing pirfenidone have been used in the treatment of idiopathic pulmonary fibrosis.

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