SR 1664 is supplied as a crystalline solid. A stock solution may be made by dissolving the SR 1664 in the solvent of choice, which should be purged with an inert gas. SR 1664 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SR 1664 in ethanol and DMSO is approximately 15 mg/ml and approximately 20 mg/ml in DMF.

SR 1664 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SR 1664 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SR 1664 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**Description**

Apart from direct peroxisome proliferator-activated receptor γ (PPARγ) agonism, several PPARγ ligands have recently been shown to exert anti-diabetic effects through a second, distinct biochemical function: blocking the obesity-linked phosphorylation of PPARγ by cyclin-dependent kinase 5 (Cdk5) at serine 273.\(^1\) This effect requires binding to the PPARγ ligand binding domain, which causes a conformational change that interferes with the ability of Cdk5 to phosphorylate serine 273. SR 1664 is a small molecule that blocks phosphorylation of peroxisome proliferator-activated receptor γ (PPARγ) by cyclin-dependent kinase 5 with an IC\(_{50}\) value of 80 nM (K\(_i\) = 28.7 nM) without exhibiting agonist activity at the PPARγ receptor.\(^2\) It demonstrates potent, dose-dependent anti-diabetic effects in obese mice without inducing fluid retention and weight gain or inhibiting bone formation.\(^2\)

**References**
