Prasugrel
Item No. 14278

CAS Registry No.: 150322-43-3
Formal Name: 2-{2-(acetyloxy)-6,7-dihydrothieno[3,2-c]
pyridin-5(4H)-yl}-1-cyclopropyl-2-(2-
fluorophenyl)-ethanone
Synonyms: CS 747, LY640315
MF: C\textsubscript{20}H\textsubscript{20}FNO\textsubscript{3}S
FW: 373.4
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years

Prasugrel is supplied as a crystalline solid. A stock solution may be made by dissolving the prasugrel in the solvent of choice, which should be purged with an inert gas. Prasugrel is soluble in the organic solvent dimethyl formamide at a concentration of approximately 5 mg/ml. Prasugrel is slightly soluble in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of prasugrel can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of Prasugrel is in PBS (pH 7.2) is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Prasugrel is a prodrug form of the platelet purinergic P2Y\textsubscript{12} receptor antagonist R-99224.\textsuperscript{1} Prasugrel (0.3 and 3 mg/kg) inhibits ex vivo washed platelet aggregation in rat platelet rich-plasma.\textsuperscript{2} In vivo, prasugrel prevents thrombus formation (ED\textsubscript{50} = 0.68 mg/kg) and increases tail bleeding time in rats. Formulations containing prasugrel have been used in the prevention of blood clots.

References