Ticagrelor
Item No. 15425

CAS Registry No.: 274693-27-5
Formal Name: (1S,2S,3R,5S)-3-[7-[(1R,2S)-2-(3,4-difluorophenyl)cyclopropyl]amino]-5-[(propylthio)-3H-1,2,3-triazolo[4,5-d]pyrimidin-3-yl]-5-(2-hydroxyethoxy)-1,2-cyclopentanediyl
Synonyms: AR-C 126532XX, AZD 6140
MF: C_{23}H_{28}F_{2}N_{6}O_{4}S
FW: 522.6
Purity: ≥98%
UV/Vis.: λ_{max}: 222, 255, 295 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ticagrelor is supplied as a crystalline solid. A stock solution may be made by dissolving the ticagrelor in the solvent of choice. Ticagrelor is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of ticagrelor in these solvents is approximately 15, 20, and 25 mg/ml, respectively.

Ticagrelor is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ticagrelor should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Ticagrelor has a solubility of approximately 0.15 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ticagrelor is a reversible antagonist of the platelet purinergic P2Y_{12} receptor (K_{i} = 14 nM; IC_{50} = 1.8 μM), which is the main receptor responsible for ADP-induced platelet aggregation.\(^1,^2\) It functions by directly changing the conformation of the P2Y_{12} receptor to inhibit ADP binding.\(^3\) Formulations containing ticagrelor have been used to reduce the rate of thrombotic cardiovascular events in patients with acute coronary syndrome.

References