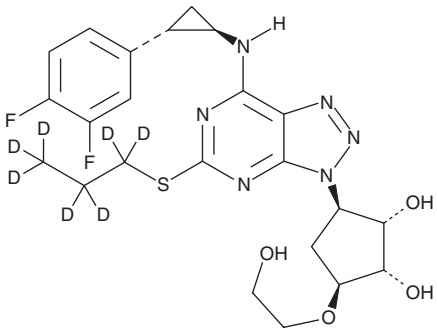
PRODUCT INFORMATION

Ticagrelor-d_7

Item No. 25027

CAS Registry No.: 1265911-55-4
Formal Name: (1S,2S,3R,5S)-3-[7-[[(1R,2S)-2-(3,4-difluorophenyl)cyclopropyl]amino]-5-(propyl-1,1,2,2,3,3,3-d_7-thio)-3H-1,2,3-triazolo[4,5-d]pyrimidin-3-yl]-5-(2-hydroxyethoxy)-1,2-cyclopentanediol



MF: $C_{23}H_{21}D_7F_2N_6O_4S$
FW: 529.6
Chemical Purity: ≥98% (Ticagrelor)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_7); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years

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

Laboratory Procedures

Ticagrelor-d_7 is intended for use as an internal standard for the quantification of ticagrelor (Item No. 15425) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Ticagrelor-d_7 is supplied as a solid. A stock solution may be made by dissolving the ticagrelor-d_7 in the solvent of choice, which should be purged with an inert gas. Ticagrelor-d_7 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ticagrelor-d_7 in these solvents is approximately 15, 20, and 25 mg/ml, respectively.

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

1. Zech, G., Hessler, G., Evers, A., *et al.* Identification of high-affinity P2Y12 antagonists based on a phenylpyrazole glutamic acid piperazine backbone. *J. Med. Chem.* **55(20)**, 8615-8629 (2012).
2. Michelson, A.D. Advances in antiplatelet therapy. *Hematology Am. Soc. Hematol. Educ. Program*, 62-69 (2011).
3. Wallentin, L. P2Y12 inhibitors: Differences in properties and mechanisms of action and potential consequences for clinical use. *Eur. Heart J.* **30(16)**, 1964-1977 (2009).

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