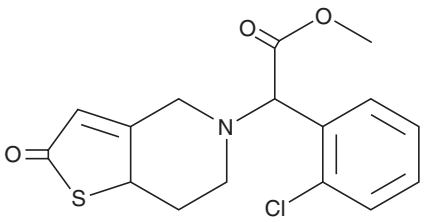
PRODUCT INFORMATION

2-oxo Clopidogrel

Item No. 20394

CAS Registry No.:	109904-27-0
Formal Name:	α-(2-chlorophenyl)-2,6,7,7a-tetrahydro-2-oxo-thieno[3,2-c]pyridine-5(4H)-acetic acid, methyl ester
MF:	$C_{16}H_{16}ClNO_3S$
FW:	337.8
Purity:	≥98% (mixture of diastereomers)
UV/Vis.:	λ_{max}: 218 nm
Supplied as:	A crystalline 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

2-oxo Clopidogrel is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-oxo clopidogrel in the solvent of choice, which should be purged with an inert gas. 2-oxo Clopidogrel is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 2-oxo clopidogrel in these solvents is approximately 5, 20, and 25 mg/ml, respectively.

2-oxo Clopidogrel is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2-oxo clopidogrel should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 2-oxo Clopidogrel has a solubility of approximately 0.04 mg/ml in a 1:20 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

2-oxo Clopidogrel is an intermediate metabolite of (±)-clopidogrel (Item No. 13657), which consists of R-(-)-clopidogrel and the active isomer S-(+)-clopidogrel (Item No. 21002).[1] (S)-(+)-clopidogrel is metabolized by the cytochrome P450 (CYP) isoforms CYP3A4 and CYP3A5 into 2-oxo (S)-(+)-clopidogrel, which is then further metabolized into the active metabolite of clopidogrel by CYP2B6, CYP2C9, CYP2C19, and CYP3A4.[1,2]

References

1. Clarke, T.A. and Waskell, L.A. The metabolism of clopidogrel is catalyzed by human cytochrome P450 3A and is inhibited by atorvastatin. *Drug Metab. Dispos.* **31(1),** 53-59 (2003).
2. Kazui, M., Nishiya, Y., Ishizuka, T., *et al.* Identification of the human cytochrome P450 enzymes involved in the two oxidative steps in the bioactivation of clopidogrel to its pharmacologically active metabolite. *Drug Metab. Dispos.* **38(1),** 92-99 (2010).

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