



CERTIFICATE OF ANALYSIS

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1. Identification

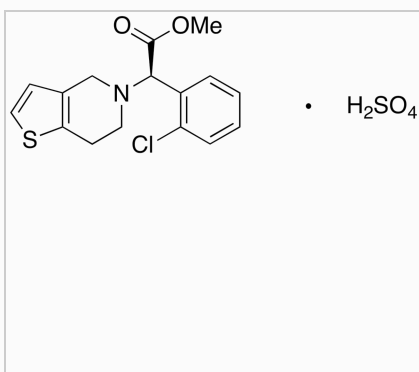
Catalogue Number: C587251

CAS Number: 120202-71-3

Product: R-(-)-Clopidogrel Hydrogen Sulfate

Synonym: (R)-(-)-Methyl 2-(2-Chlorophenyl)-2-(6,7-dihydro-4H-thieno[3,2-c]pyridin-5-yl)acetate Hydrogen Sulfate; (R)-Clopidogrel Bisulfate; SR 25989C; Clopidogrel EP Impurity C

Structure:



Molecular Formula:

C₁₆H₁₈ClNO₆S₂

Molecular weight:

419.9

Source of Product:

N/A

Solubility:

DMSO (Slightly), Methanol (Slightly), Water (Slightly)

Lot Number: 2022-GHZ-133

Purity: 98%

Shipping Condition: This Product Is Stable To Be Shipped At Room Temperature

Storage Condition: 4°C

2. Warning

Warning 1:

Warning 2:

Warning 3:

3. Analytical Information

| Tests: | Specifications: | Results: |
|--------------------|---------------------------|-------------------------------|
| Appearance | White to Pale Beige Solid | White to Off-White Solid |
| NMR | Conforms to Structure | Conforms |
| Elemental Analysis | Conforms | %C: 45.11, %H: 4.42, %N: 3.15 |
| HPLC Purity | Report Result | 98.60% (200 nm) |
| MS | Conforms to Structure | Conforms |
| Sulfate Content | Report Result | 20.58% by Ion Chromatography |
| Specific Rotation | Report Result | -51.9° (c = 0.2, Methanol) |

Additional Information: N/A

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of ± 2%. Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

4. Signatures

| Reviewed By | Reviewed By | C of A Approved By | Test Date | Retest Date |
|---------------|---------------|---------------------|------------|-------------|
| Sarbjeet Kaur | Toni Rantanen | Christina Gouliaras | 12/22/2022 | 12/20/2026 |