HCCFA <AKR1B10 inhibitor>

Research use only. Not for human or veterinary use.

This product has been commercialized with the support of both the University of Toyama and Gifu Pharmaceutical University.

**Description**

- **Catalog Number:** FDV-0016
- **Lot Number:** see vial label
- **Product Name:** HCCFA
- **Chemical Name:** 7-Hydroxy-2-oxo-2H-chromene-3-carboxylic acid [3-(4-fluorophenyl)propyl]amide
- **Alternate Name:** N-[3-(4-fluorophenyl)propyl]-7-hydroxy-2-oxo-2H-1-Benzopyran-3-carboxamide
- **Size:** 1 mg
- **Chemical Structure:**

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\[ \text{Chemical Structure Image} \]
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- **CAS No.:** 2136579-33-2
- **Molecular Formula:** C\textsubscript{19}H\textsubscript{16}FNO\textsubscript{4}
- **Molecular Weight:** 341.33
- **Melting Point:** 207-209 °C (Recrystallization Solvent: Ethanol)
- **Solubility:** Soluble in DMSO
- **Purity:** ≥ 98% by HPLC

**Reconstitution and Storage**

- **Reconstitution:** Centrifuge vial briefly prior to opening.
  
  For stock solution, this compound can be reconstituted in DMSO to a concentration of 10 mM.

- **Storage:** Store powder in the dark at -20 °C.
  
  After reconstitution, aliquot and store at -20 °C protected from light. Avoid repeated freeze-thaw cycles.

**Product Background**

A novel low-molecular compound, HCCFA, is a potent and selective Inhibitor of Aldo-Keto Reductase family member 1B10 (AKR1B10). The inhibitory effect of HCCFA on AKR1B10 is remarkably strong and IC\textsubscript{50} value is 3.5 nM. In contrast, HCCFA has a low inhibitory potency toward aldose reductase (AR, also known as AKR1B1) whose structure is similar to AKR1B10.

AKR1B10 is thought to be involved in the development, progression, and survival of carcinomas. The inhibitor HCCFA is reported to suppress migration and proliferation of lung cancer A549 cells, to suppress metastasis of A549 cells into mouse lung, and to increase CDDP sensitivity of CDDP-resistant A549 cells.

**Reference**