

Product Specification Sheet

Product Name: TAK-875

Catalog Number: C8875

Technical information:

Chemical Formula: $C_{29}H_{32}O_7S \cdot 1/2H_2O$

CAS #: 1000413-72-8

Molecular Weight: 533.63

Purity: > 98%

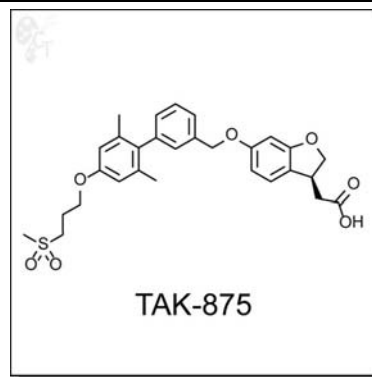
Appearance: White solid

Solubility: Soluble in DMSO up to 100mM

Chemical Name: [(3S)-6-({2',6'-dimethyl-4'-[3-(methylsulfonyl)propoxy]biphenyl-3-yl}methoxy)-2,3-dihydro-1-benzofuran-3-yl]acetic acid hemi-hydrate

Storage: Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

Shelf Life: In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.



- Handling:**
- To make 10 mM stock solution, add 0.187mL of DMSO for each mg of TAK-875.
 - For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

Biological Activity: TAK-875 is an orally-available, benzofuran-based, agonist of GPR40 for the potential treatment of Type 2 diabetes mellitus, with an human EC₅₀ of 0.014 uM in a FLIPR assay. It has high selectivity over GPR41, GPR43, and GPR120, with EC₅₀s all greater than 10 uM. [1] Oral dosing (0.3-3 mg/kg) of TAK-875 in a glucose intolerance test in female Wistar rats reduced blood glucose excursion. Insulin secretion was increased during an oral glucose tolerance test.

TAK-875 was shown to activate the G_q-mediated signalling pathway in pancreatic b-cells. Prolonged agonist stimulation by TAK-875 revealed no evidence of b-cell dysfunction or toxicity, nor does it cause a induction of a marker of apoptosis in pancreatic b-cells. [2]

- Reference:**
1. Negoro et al., ACS Med. Chem. Lett. 2010, 1, 290-294.
 2. Tsujihata et al., TAK-875, an orally available G protein-coupled receptor 40/free fatty acid receptor 1 agonist, enhances glucose-dependent insulin secretion and improves both postprandial and fasting hyperglycemia in type 2 diabetic rats. J. Pharmacol. Exp. Ther. 2011, 339(1), 228-237. Pubmed ID: 21752941

To reorder: <http://www.cellagentech.com/TAK-875/>
For Technical Support: technical@cellagentech.com

Chemicals are sold for research use only, not for clinical or diagnostic use.