

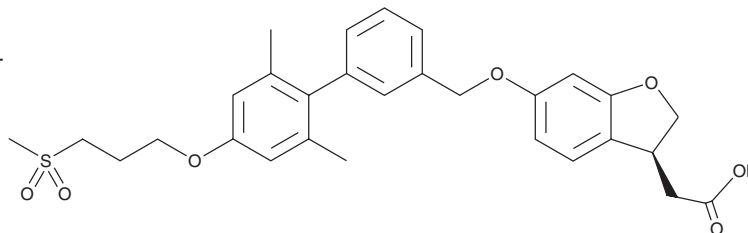
PRODUCT INFORMATION



TAK-875

Item No. 17335

CAS Registry No.: 1000413-72-8
Formal Name: (3S)-6-[[2',6'-dimethyl-4'-[3-(methylsulfonyl)propoxy][1,1'-biphenyl]-3-yl]methoxy]-2,3-dihydro-3-benzofuranacetic acid
MF: C₂₉H₃₂O₇S
FW: 524.6
Purity: ≥95%
UV/Vis.: λ_{max}: 285 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

TAK-875 is supplied as a crystalline solid. A stock solution may be made by dissolving the TAK-875 in the solvent of choice, which should be purged with an inert gas. TAK-875 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of TAK-875 in these solvents is approximately 30 mg/ml.

TAK-875 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TAK-875 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. TAK-875 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The free fatty acid receptor 1 (FFAR1; GPR40) is highly expressed in pancreatic β-cells and activated by medium and long-chain fatty acids.¹ There is evidence of a link between FFAR1 (GPR40) and the ability of fatty acids to amplify glucose-stimulated insulin secretion, making this signaling pathway a potential target for regulating diabetes, obesity, and other metabolic disorders.^{2,3} TAK-875 is a selective FFAR1 (GPR40) agonist (EC₅₀ = 26 nM) that does not exhibit activity on the related FFARs FFAR2 (GPR43) or FFAR3 (GPR41).⁴

References

1. Briscoe, C.P., Tadayyon, M., Andrews, J.L., *et al.* The orphan G protein-coupled receptor GPR40 is activated by medium and long chain fatty acids. *J. Biol. Chem.* **278(13)**, 11303-11311 (2003).
2. Itoh, Y., Kawamata, Y., Harada, M., *et al.* Free fatty acids regulate insulin secretion from pancreatic β cells through GPR40. *Nature* **422(6928)**, 173-176 (2003).
3. Steneberg, P., Rubins, N., Bartoov-Shifman, R., *et al.* The FFA receptor GPR40 links hyperinsulinemia, hepatic steatosis, and impaired glucose homeostasis in mouse. *Cell Metab.* **1(4)**, 245-258 (2005).
4. Christiansen, E., Due-Hansen, M.E., Urban, C., *et al.* Free fatty acid receptor 1 (FFA1/GPR40) agonists: Mesitylpropoxy appendage lowers lipophilicity and improves ADME properties. *J. Med. Chem.* **55(14)**, 6624-6628 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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