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Produktinformation



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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- Expressversand

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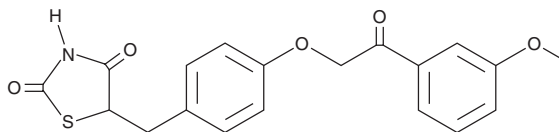
PRODUCT INFORMATION



MSDC-0602

Item No. 27829

CAS Registry No.: 1133819-87-0
Formal Name: 5-[[4-[2-(3-methoxyphenyl)-2-oxoethoxy]phenyl]methyl]-2,4-thiazolidinedione
MF: C₁₉H₁₇NO₅S
FW: 371.4
Purity: ≥95%
UV/Vis.: λ_{max}: 221, 250, 288, 311 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MSDC-0602 is supplied as a solid. A stock solution may be made by dissolving the MSDC-0602 in the solvent of choice, which should be purged with an inert gas. MSDC-0602 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MSDC-0602 in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

MSDC-0602 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MSDC-0602 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MSDC-0602 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

MSDC-0602 is a PPAR γ -sparing thiazolidinedione derivative.¹ It binds only weakly to PPAR γ (IC₅₀ = 18.25 μ M) and induces minimal activation of a Gal4-PPAR γ reporter construct when used at a concentration of 50 μ M. MSDC-0602 binds to mitochondrial membranes and decreases the pyruvate-induced oxygen consumption rate in control mitochondria but not in liver-specific mitochondrial pyruvate carrier 2 knockout (LS-Mpc2^{-/-}) mitochondria.² It reduces body weight gain and adiposity, as well as increases intrascapular brown adipose tissue (BAT) mass in a mouse model of non-alcoholic steatohepatitis (NASH) induced by a high-*trans*-fat, -fructose, and -cholesterol diet when administered in the diet for 12 weeks, starting four weeks after the beginning of the diet.³ It also reverses hepatic fibrosis and stellate cell fibrinogenesis when administered for three weeks, starting 16 weeks after the beginning of the diet. MSDC-0602 decreases plasma glucose, triglyceride, and cholesterol levels in *ob/ob* mice and increases insulin sensitivity in the striatal muscle, adipose tissue, and liver of diet-induced obese mice.¹

References

1. Chen, Z., Vigueira, P.A., Chambers, K.T., *et al.* Insulin resistance and metabolic derangements in obese mice are ameliorated by a novel peroxisome proliferator-activated receptor γ -sparing thiazolidinedione. *J. Biol. Chem.* **287**(28), 23537-23548 (2012).
2. McCommis, K.S., Chen, Z., Fu, X., *et al.* Loss of mitochondrial pyruvate carrier 2 in the liver leads to defects in gluconeogenesis and compensation via pyruvate-alanine cycling. *Cell Metab.* **22**(4), 682-694 (2015).
3. McCommis, K.S., Hodges, W.T., Brunt, E.M., *et al.* Targeting the mitochondrial pyruvate carrier attenuates fibrosis in a mouse model of nonalcoholic steatohepatitis. *Hepatology* **65**(5), 1543-1556 (2017).

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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