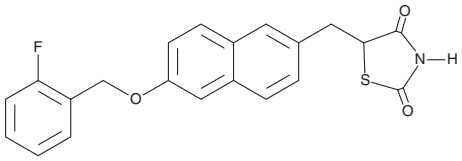
PRODUCT INFORMATION

MCC-555

Item No. 70735

CAS Registry No.:	161600-01-7
Formal Name:	5-[[6-[(2-fluorophenyl)methoxy]-2-napthalenyl]methyl]-2,4-thiazolidinedione
Synonyms:	Isaglitazone, Netoglitazone, RWJ 241947
MF:	$C_{21}H_{16}NSO_3F$
FW:	381.4
Purity:	≥98%
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

MCC-555 is supplied as a crystalline solid. A stock solution may be made by dissolving the MCC-555 in the solvent of choice, which should be purged with an inert gas. MCC-555 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MCC-555 in these solvents is approximately 1 mg/ml in ethanol and approximately 30 mg/ml in DMSO and DMF.

MCC-555 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MCC-555 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MCC-555 has a solubility of approximately 1 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 peroxisome proliferator-activated receptor-γ (PPARγ) is the nuclear receptor responsible for transducing the therapeutic activity of the thiazolidinediones (TZDs), a group of structurally related synthetic agonists with antidiabetic actions *in vivo*.[1,2] Rosiglitazone (BRL49653) is a prototypical TZD and has served as a reference compound for this class.[3]

MCC-555 is a structural homolog of rosiglitazone and the other TZDs. MCC-555 binds with about 1/10 the affinity of rosiglitazone to PPARγ.[4] Despite this, MCC-555 is a more potent antidiabetic agent in whole animal experiments than rosiglitazone and several other prototypic TZDs; the ED_{50} value in these experiments was 2.7 mg/kg for MCC-555 compared with 7.1 mg/kg for rosiglitazone. MCC-555 is therefore a unique new member of the TZD class and may be useful in differentiating some of the multiple activities attributed to this class of compounds.

References

1. Willson, T.M., Cobb, J.E., Cowan, D.J., *et al.* The structure-activity relationship between peroxisome proliferator-activated receptor γ agonism and the antihyperglycemic activity of thiazolidinediones. *J. Med. Chem.* **39**, 665-668 (1996).
2. Cantello, B.C.C., Cawthorne, M.A., Cottam, G.P., *et al.* [[ω-(Heterocyclylamino)alkoxy]benzyl]-2,4-thiazolidinediones as potent antihyperglycemic agents. *J. Med. Chem.* **37**, 3977-3985 (1994).
3. Lehmann, J.M., Moore, L.B., Smith-Oliver, T.A., *et al.* An antidiabetic thiazolidinedione is a high affinity ligand for peroxisome proliferator-acivated receptor γ (PPARγ). *J. Biol. Chem.* **270**, 12953-12956 (1995).
4. Reginato, M.J., Bailey, S.T., Krakow, S.L., *et al.* A potent antidiabetic thiazolidinedione with unique peroxisome proliferator-activated receptor γ-activating properties. *J. Biol. Chem.* **273**, 32679-32684 (1998).

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