

Product Data Sheet

Product Name: SR 202
Cat. No.: GC11586

Chemical Properties

Cas. No. 76541-72-5

Chemical Name (S)-(4-chlorophenyl)(dimethoxyphosphoryl)methyl dimethyl phosphate

SMILES CIC1=CC=C(C=C1)[C@@H](OP(OC)(OC)=O)P(OC)(OC)=O

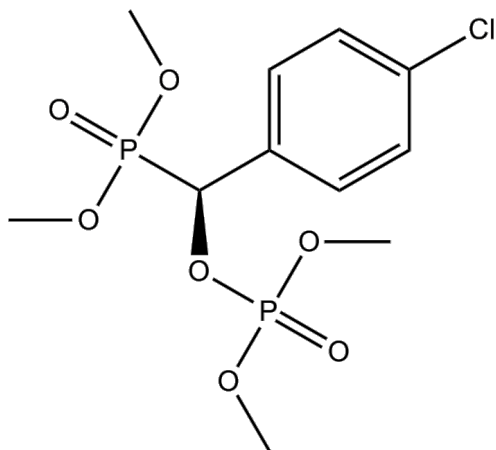
Formula $C_{11}H_{17}ClO_7P_2$ M.Wt 358.65

Solubility Water: 100 mM Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

IC50: 140 μM for attenuation of troglitazone-induced peroxisome proliferator-activated receptor gamma (PPAR) transcriptional activity [1]

The phosphonophosphate SR-202 [(S)-(4-chlorophenyl)(dimethoxyphosphoryl)methyl dimethyl phosphate] is a PPAR antagonist, which inhibits both TZD-stimulated recruitment of the coactivator

Caution: Product has not been fully validated for medical applications. For research use only.

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steroid receptor coactivator-1 and TZD-induced transcriptional activity of the receptor. PPAR is a nuclear receptor which regulates glucose metabolism and fatty acid storage.

In vitro: SR-202 is a specific antagonist of PPAR, which shows selectivity both among the PPAR family members and other nuclear receptors. SR-202 also Inhibits PPAR-dependent differentiation of adipocytes. In cell culture, SR-202 efficiently antagonizes hormone- and TZD induced adipocyte differentiation [1].

In vivo: Decreasing PPAR activity by treatment with SR-202 leads to a reduction of both high fat diet-induced adipocyte hypertrophy and insulin resistance. Treatment with SR-202 also dramatically improves insulin sensitivity in the diabetic ob/ob mice [1]. When wild-type mice are fed a high-fat diet, the plasma levels of TNF- α are raised, and SR-202 treatment protects against this rise [2].

Clinical trial: So far, no clinical study has been conducted.

References:

- [1] Rieusset J, Touri F, Michalik L, Escher P, Desvergne B, Niesor E, Wahli W. A new selective peroxisome proliferator-activated receptor gamma antagonist with antiobesity and antidiabetic activity. *Mol Endocrinol*. 2002 Nov;16(11):2628-44.
- [2] Doggrell S. Do peroxisome proliferation receptor-gamma antagonists have clinical potential as combined antiobesity and antidiabetic drugs *Expert Opin Investig Drugs*. 2003 Apr;12(4):713-6.

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