
Product Data Sheet

Product Name: AC 45594

Cat. No.: GC10908

Chemical Properties

Cas. No. 13037-86-0

Chemical Name 4-(heptyloxy)phenol

SMILES OC1=CC=C(C=C1)OCCCCCCCFormula $C_{13}H_{20}O_2$ M.Wt 208.3

Solubility <20.83mg/ml in DMSO; <20.83mg/ml in ethanol 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**

AC 45594 is a full inverse agonist of steroidogenic factor 1 (SF-1) with an IC₅₀ value of 50~100 nM [1].

SF-1 is a constitutively nuclear hormone receptor. It is essential to the development of gonadal and adrenal glands. It acts as a shaping factor in sexual differentiation and determination. Its effects are exerted primarily via controlling steroid hormone synthesis [1].

Human adrenocortical H295R/TR SF-1 cells were overexpressing SF-1 in a Dox-inducible fashion. After a 4-day treatment with AC 45594, the proliferation of H295R/TR SF-1 cells cultured in basal conditions was inhibited in a dose-dependent manner. AC 45594 showed maximal effect at 10 μM. SF-1 overexpression induced cell proliferation. In the presence of Dox, incubation with AC 45594 at 1 μM markedly reduced the effect of SF-1 overexpression. Moreover, treatment with AC 45594 increased the percentage of sub-G1 (apoptotic) cells [2]. In human adrenocortical H295 cells, cAMP is able to induce the

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

expression of StAR. This induction is dependent on the presence of SF-1. Incubation with AC 45594 dose-dependently reduced amounts of the StAR mRNA to basal levels. At the protein level, 24 h after the cAMP treatment, StAR was increased by 30-fold. But treatment with AC 45594 completely and dose-dependently reversed the cAMP-dependent activation of StAR [1].

No result regarding the effect of AC 45594 in animal bodies had been found.

References:

- [1]. Del Tredici AL, Andersen CB, Currier EA, et al. Identification of the first synthetic steroidogenic factor 1 inverse agonists: pharmacological modulation of steroidogenic enzymes. *Molecular pharmacology*, 2008, 73(3): 900-908.
- [2]. Doghman M, Cazareth J, Douguet D, et al. Inhibition of adrenocortical carcinoma cell proliferation by steroidogenic factor-1 inverse agonists. *The Journal of Clinical Endocrinology & Metabolism*, 2009, 94(6): 2178-2183.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA