
Product Data Sheet

Product Name: Gemigliptin (LC15-0444)

Cat. No.: GC33769

Chemical Properties

Cas. No. 911637-19-9

SMILES O=C1N(C[C@@H](N)CC(N2CCC3=C(C(F)(F)F)N=C(C(F)(F)F)N=C3C2)=O)CC(F)(F)CC1

Formula $C_{18}H_{19}F_8N_5O_2$ M.Wt 489.36Solubility DMSO : ≥ 122.5 mg/mL (250.33 mM) Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ 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 **Protocol****Kinase experiment:**

The enzyme kinetic analysis of gemigliptin on DPP-4 is performed using a continuous spectrophotometric assay with the substrate Gly-Pro-pNA. Briefly, inhibition of DPP-4 activity is determined by measuring the absorbance (at 390 nm) resulting from the cleavage of the substrate Gly-Pro-pNA by the DPP-4 enzyme under steady-state conditions. Enzyme activity is defined as the slope (in mOD/ min) from 5 to 15 min. The inhibition pattern is evaluated using a Lineweaver-Burk plot, and the K_i is determined using a curve- fitting program[2].

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

Animal experiment:

Mice[1]Seven week-old male C57BL/KsJ-db/db mice and their lean littermates (db/p, normal) are randomly assigned to three (n=10) groups. One group of db/db mice is orally administered gemigliptin (100 mg/kg body weight) and another group is administered the same amount of vehicle via oral gavage for 12 weeks. Non-diabetic littermates receive the same vehicle treatment. Blood glucose level and body weight are measured weekly[1].

References:

- [1]. Jung E, et al. Gemigliptin, a novel dipeptidyl peptidase-4 inhibitor, exhibits potent anti-glycation properties in vitro and in vivo. Eur J Pharmacol. 2014 Dec 5;744:98-102.
- [2]. Kim SH, et al. Pharmacological profiles of gemigliptin (LC15-0444), a novel dipeptidyl peptidase-4 inhibitor, in vitro and in vivo. Eur J Pharmacol. 2016 Oct 5;788:54-64.

Background

Gemigliptin (Zemiglo, LC15-0444) is a potent, selective and long-acting dipeptidyl peptidase 4 (DPP 4) inhibitor with a K_i of 7.25 nM. Gemigliptin shows at least >23,000-

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

fold selectivity for DPP-4 over various proteases and peptidases, including DPP-8, DPP-9, and fibroblast activation protein (FAP)- α .

[1] Sung-Ho Kim, et al. Eur J Pharmacol. 2016 Oct 5;788:54-64. [2] Sung-Ho Kim, et al. Arch Pharm Res. 2013 Oct;36(10):1185-8.

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