
Product Data Sheet

Product Name: Teneligliptin hydrobromide hydrate

Cat. No.: GC37757

Chemical Properties

Cas. No. 1572583-29-9

SMILES O=C([C@H]1NC[C@@H](N2CCN(C3=CC(C)=NN3C4=CC=CC=C4)CC2)C1)N5CSCC5.[x H2O].[5/2 HBr]

Formula C22H30N6OS M.Wt 426.58

Solubility DMF: 30 mg/ml, DMSO: 30 mg/ml, Ethanol: 2 mg/ml, PBS (pH 7.2): 10 mg/ml 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**

Teneligliptin is a dipeptidyl peptidase 4 (DPP-4) inhibitor ($IC_{50}s = 0.37$ and 0.29 nM for the human and rat enzymes, respectively).¹ It is selective for DPP-4 over DPP-8 and DPP-9 ($IC_{50}s = 260$ and 540 nM, respectively, for the human enzymes). Teneligliptin (0.03 - 1 mg/kg) inhibits increases in plasma glucose levels in an oral glucose tolerance test in Zucker fatty rats. It reduces body weight, inhibits hepatic steatosis, and decreases plasma insulin levels in a mouse model of high-fat diet-induced obesity when administered at doses of 30 and 60 mg/kg.² Teneligliptin scavenges hydroxyl radicals in a cell-free assay ($IC_{50} = 0.315$ mM) and decreases urinary levels of 8-hydroxy-2'-deoxyguanosine, a marker of oxidative stress, in a DPP-4-deficient rat model of diabetes induced by streptozotocin when administered at a dose of 10 mg/kg per day.³

1. Yoshida, T., Akahoshi, F., Sakashita, H., et al. Discovery and preclinical profile of teneligliptin (3-[(2S,4S)-4-[4-(3-methyl-1-phenyl-1H-pyrazol-5-yl)piperazin-1-yl]pyrrolidin-2-ylcarbonyl]thiazolidine): A highly potent, selective, long-lasting and orally

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

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active dipeptidyl peptidase IV inhibitor for the treatment of type 2 diabetes *Bioorg. Med. Chem.* 20(19)5705-5719(2012) 2. Fukuda-Tsuru, S., Kakimoto, T., Utsumi, H., et al. The novel dipeptidyl peptidase-4 inhibitor teneligliptin prevents high-fat diet-induced obesity accompanied with increased energy expenditure in mice *Eur. J. Pharmacol.* 723207-215(2014) 3. Kimura, S., Inoguchi, T., Yamasaki, T., et al. A novel DPP-4 inhibitor teneligliptin scavenges hydroxyl radicals: In vitro study evaluated by electron spin resonance spectroscopy and in vivo study using DPP-4 deficient rats *Metabolism* 65(3)138-145(2016)

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