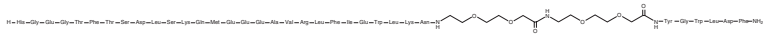
PRODUCT INFORMATION

ZP3022

Item No. 42636

CAS Registry No.: 1345835-12-2
Formal Name: L-histidylglycyl-L-α-glutamylglycyl-L-threonyl-L-phenylalanyl-L-threonyl-L-seryl-L-α-aspartyl-L-leucyl-L-seryl-L-lysyl-L-glutaminyl-L-methionyl-L-α-glutamyl-L-α-glutamyl-L-α-glutamyl-L-alanyl-L-valyl-L-arginyl-L-leucyl-L-phenylalanyl-L-isoleucyl-L-α-glutamyl-L-tryptophyl-L-leucyl-L-lysyl-L-asparaginyl-2- [2-(2-aminoethoxy) ethoxy] acetyl-2-[2- (2-aminoethoxy) ethoxy] acetyl-L-tyrosylglycyl-L-tryptophyl-L-leucyl-L-α-aspartyl-L-phenylalaninamide



MF: $C_{199}H_{294}N_{48}O_{61}S$
FW: 4,366.9
Purity: ≥95%
Supplied as: A 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

ZP3022 is supplied as a solid. A stock solution may be made by dissolving the ZP3022 in the solvent of choice, which should be purged with an inert gas. ZP3022 is soluble (≥10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ZP3022 can be prepared by directly dissolving the solid in aqueous buffers. ZP3022 is slightly soluble (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

ZP3022 is a dual agonist of the glucagon-like peptide 1 receptor (GLP-1R) and cholecystokinin 2 (CCK_2) receptor.[1] It selectively increases cAMP accumulation or ERK phosphorylation in HEK293 cells expressing GLP-1R or the CCK_2 receptor over ERK phosphorylation in HEK293 cells expressing the CCK_1 receptor (EC_{50}s = 0.02, 10.3, and >1,000 nM, respectively, for the human receptors). ZP3022 (40 nM) increases the proliferation of rat neonatal β-cells *in vitro*.[2] It also increases glucose-induced insulin secretion (GSIS) in rat pancreatic islets when used at concentrations of 10 and 100 nM and reduces body weight in rats when administered at a dose of 40 nmol/kg twice per day. ZP3022 (100 nmol/kg per day) increases β-cell mass and total pancreatic mass and improves glucose tolerance in *db/db* mice.[1] It also reduces food intake but not body weight in *db/db* mice.

References

1. Fosgerau, K., Jessen, L., Lind Tolborg, J., *et al.* The novel GLP-1-gastrin dual agonist, ZP3022, increases β-cell mass and prevents diabetes in db/db mice. *Diabetes Obes. Metab.* **15(1),** 62-71 (2013).
2. Skarbaliene, J., Rigbolt, K.T., Fosgerau, K., *et al.* In-vitro and in-vivo studies supporting the therapeutic potential of ZP3022 in diabetes. *Eur. J. Pharmacol.* **815,** 181-189 (2017).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM