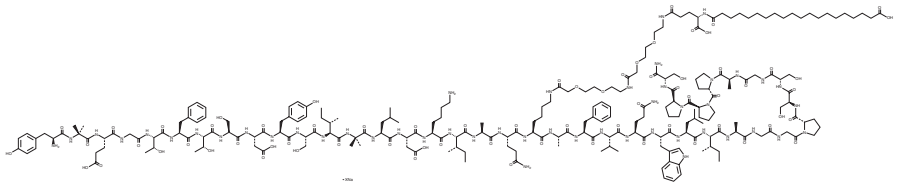
PRODUCT INFORMATION

Tirzepatide (sodium salt)

Item No. 39748

Formal Name: L-tyrosyl-2-methylalanyl-L-α-glutamylglycyl-L-threonyl-L-phenylalanyl-L-threonyl-L-seryl-L-α-aspartyl-L-tyrosyl-L-seryl-L-isoleucyl-2-methylalanyl-L-leucyl-L-α-aspartyl-L-lysyl-L-isoleucyl-L-alanyl-L-glutaminyl-N^6-[(22S)-22,42-dicarboxy-1,10,19,24-tetraoxo-3,6,12,15-tetraoxa-9,18,23-triazadotetracont-1-yl]-L-lysyl-L-alanyl-L-phenylalanyl-L-valyl-L-glutaminyl-L-tryptophyl-L-leucyl-L-isoleucyl-L-alanylglycylglycyl-L-prolyl-L-seryl-L-serylglycyl-L-alanyl-L-prolyl-L-prolyl-L-prolyl-L-serinamide, sodium salt



Synonym: LY3298176
MF: $C_{225}H_{348}N_{48}O_{68}$ • XNa
FW: 4,813.5
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

Tirzepatide (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the tirzepatide (sodium salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Tirzepatide is an agonist of glucagon-like peptide 1 receptor (GLP-1R) and gastric inhibitory polypeptide (GIP) receptor.[1] It induces cAMP production in HEK293 cells expressing human GLP-1R or human GIP receptor (EC_{50}s = 6.54 and 1.01 nM, respectively). Tirzepatide (100 nM) induces receptor internalization in HEK293 cells expressing human GLP-1R or GIP receptor. *In vivo*, tirzepatide (10 nmol/kg per day) decreases body weight, food intake, plasma levels of leptin, triglycerides, and free fatty acids (FFAs), hepatic levels of triglycerides, and blood glucose levels in a mouse model of high-fat diet-induced obesity.[2] It prevents *A. alternata*-induced increases in the numbers of eosinophils and lymphocytes in the bronchoalveolar lavage fluid (BALF) from *A. alternata*-challenged mice when administered at a dose of 50 nmol/kg every three days.[3] Tirzepatide (50 nmol/kg every three days) inhibits bronchoconstriction induced by the muscarinic receptor agonist methacholine (acetyl-β-methylcholine; Item No. 23092) in a mouse model of diabetes-induced asthma. Formulations containing tirzepatide have been used in the treatment of type 2 diabetes mellitus.

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

PRODUCT INFORMATION

References

1. Willard, F.S., Douros, J.D., Gabe, M.B.N., *et al.* Tirzepatide is an imbalanced and biased dual GIP and GLP-1 receptor agonist. *JCI Insight* **5(17),** e140532 (2020).
2. Samms, R.J., Christe, M.E., Collins, K.A.L., *et al.* GIPR agonism mediates weight-independent insulin sensitization by tirzepatide in obese mice. *J. Clin. Invest.* **131(12),** e146353 (2021).
3. Toki, S., Zhang, J., Printz, R.L., *et al.* Dual GIPR and GLP-1R agonist tirzepatide inhibits aeroallergen-induced allergic airway inflammation in mouse model of obese asthma. *Clin. Exp. Allergy* **53(2),** 216-221 (2023).

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