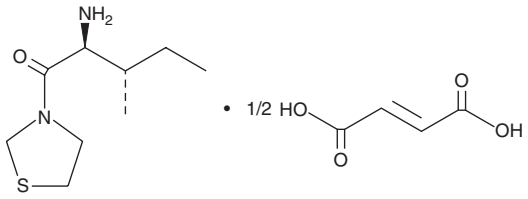
PRODUCT INFORMATION

P32/98 (hemifumarate)

Item No. 16887

CAS Registry No.: 251572-86-8
Formal Name: (2S,3S)-2-amino-3-methyl-1-(3-thiazolidinyl)-1-pentanone, 2E-butenedioate (2:1)
MF: $C_9H_{18}N_2O_S \bullet 1/2C_4H_4O_4$
FW: 260.4
Purity: ≥95%
Supplied as: A crystalline 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

P32/98 (hemifumarate) is supplied as a crystalline solid. A stock solution may be made by dissolving the P32/98 (hemifumarate) in the solvent of choice, which should be purged with an inert gas. P32/98 (hemifumarate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of P32/98 (hemifumarate) in these solvents is approximately 1, 15, and 5 mg/ml, respectively.

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 P32/98 (hemifumarate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of P32/98 (hemifumarate) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

The glucose-dependent insulinotropic polypeptide (GIP) and glucagon-like peptide 1 (GLP-1) are responsible for a majority of nutrient-stimulated insulin secretion. After being released into the circulation, GIP and GLP-1 are inactivated by the circulating enzyme dipeptidyl peptidase IV (DPP IV). DPP IV inhibitors have emerged as a new class of experimental antidiabetic agents. P32/98 is a competitive transition-state substrate analog inhibitor of DPP IV (K_i = 126 nM).[1] At 20 mg/kg/day, it has been used to improve glucose tolerance, insulin sensitivity, and β-cell glucose responsiveness in diabetic rat models.[2]

References

1. Weber, A.E. Dipeptidyl peptidase IV inhibitors for the treatment of diabetes. *J. Med. Chem.* **47(17)**, 4135-4141 (2004).
2. Pospisilik, J.A., Stafford, S.G., Demuth, H.U., *et al.* Long-term treatment with the dipeptidyl peptidase IV inhibitor P32/98 causes sustained improvements in glucose tolerance, insulin sensitivity, hyperinsulinemia, and β-cell glucose responsiveness in VDF (*fa/fa*) zucker rats. *Diabetes* **51**, 943-950 (2002).

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