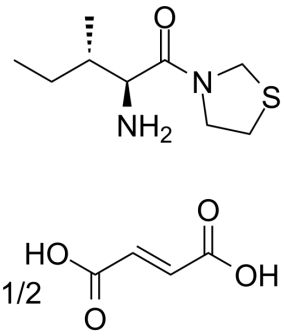
P32/98 hemifumarate

Cat. No.:	HY-129736
CAS No.:	251572-86-8
Molecular Formula:	$C_9H_{18}N_2OS._1/_2C_4H_4O_4$
Molecular Weight:	260.36
Target:	Dipeptidyl Peptidase
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

P32/98 hemifumarateis a potent inhibitor of dipeptidyl peptidase IV with a K_i value of 130 nM. P32/98 hemifumarate improves glucose tolerance, insulin sensitivity and β-cell responsiveness in fatty Zucker rat model[1][2][3].

IC_{50} & Target

DPP-IV
130 nM (Ki)

In Vitro

GLP-1 acts function of stimulation of glucose dependent insulin secretion and induction of satiety feelings, and DPPIV is the major renal catabolic pathway for GLP-1 in vivo[2].
P32/98 hemifumarate, together with 200 pM GLP-1, (10 μM; 3 h) shows no significant inhibition of sodium re-absorption in porcine proximal tubular cells[2].
P32/98 hemifumarate (10 μM; 96 h) does not influence the mRNA expression of GLP-1R, DPPIV, Na^+/H^+ exchanger isoform 3 (NHE3), sodium-dependent glucose transporter slc5a1, slc5a2 (SGLT1, 2)[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[2]

Cell Line:	Porcine proximal tubular cells
Concentration:	10 μM
Incubation Time:	96 hours
Result:	Showed no toxic.

In Vivo

P32/98 hemifumarate (25 mg/kg; i.g.; once daily) long-time treatment significantly improves the glucose tolerance in Zucker diabetic fatty rats, a model of IGT (impaired glucose tolerance)[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Zucker diabetic fatty rat[3]
Dosage:	25 mg/kg
Administration:	Oral gavage; once daily

Result:	Significantly improved the glucose tolerance in Zucker diabetic fatty rats.

REFERENCES

[1]. Augstein P, et al. Efficacy of the dipeptidyl peptidase IV inhibitor isoleucine thiazolidide (P32/98) in fatty Zucker rats with incipient and manifest impaired glucose tolerance. Diabetes Obes Metab. 2008;10(10):850-861.

[2]. Schlatter P, et al. Glucagon-like peptide 1 receptor expression in primary porcine proximal tubular cells. Regul Pept. 2007 Jun 7;141(1-3):120-8.

[3]. Wargent E, et al. Improvement of glucose tolerance in Zucker diabetic fatty rats by long-term treatment with the dipeptidyl peptidase inhibitor P32/98: comparison with and combination with rosiglitazone. Diabetes Obes Metab. 2005;7(2):170-181.

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