Xenin

Cat. No.:	HY-P0259
CAS No.:	144092-28-4
Molecular Formula:	$C_{139}H_{224}N_{38}O_{32}S$
Molecular Weight:	2971.57
Sequence:	Met-Leu-Thr-Lys-Phe-Glu-Thr-Lys-Ser-Ala-Arg-Val-Lys-Gly-Leu-Ser-Phe-His-Pro-Lys-Arg-Pro-Trp-Ile-Leu
Sequence Shortening:	MLTKFETKSARVKGLSFHPKRPWIL
Target:	Others
Pathway:	Others
Storage:	Sealed storage, away from moisture and light, under nitrogen Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)

BIOLOGICAL ACTIVITY

Description	Xenin is a 25-amino acid peptide initially isolated from human gastric mucosa. Xenin is a gut hormone that can reduce food intake.
In Vitro	Xenin is abundantly expressed in gastric, duodenal, and jejunal mucosa, and is found at lower levels in the pancreas. Xenin is released into the circulation postprandially and has been reported to stimulatepancreatic endocrine and exocrine secretion, inhibit gastrin secretion, and influence gastrointestinal motility. Xenin is highly homologous to neurotensin. Xenin and neurotensin are reported to have similar biological effects[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Both intracerebroventricular and intraperitoneal administration of xenin inhibit fasting-induced hyperphagia in wild-type mice in a dose-dependent manner. The intraperitoneal injection of xenin also reduces nocturnal intake in ad libitum–fed wild-type mice. The intraperitoneal injection of xenin increases Fos immunoreactivity in hypothalamic nuclei, including the paraventricular nucleus and the arcuate nucleus. Xenin reduces food intake in agouti and ob/ob mice[2]. Gastric emptying rate is reduced by about 93% in xenin-treated mice compared to saline-treated control mice. The i.p. xenin injection significantly increases Fos-immunoreactive cells in the nucleus of the solitary tract of the brainstem, but not area postrema and dorsal motor nucleus of the vagus[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [2]	Mice: Mice (wild-type and ob/ob mice) are fasted overnight (1800–1000 h) and injected with xenin intracerebroventricularly (0.1, 1, or 5 μg) or intraperitoneally (0.5, 5, 15, or 50 μg/g body wt) at 1000 h. To compare the feeding-suppressing effect between xenin and neurotensin, equimolar amounts (16.5 nmol) of xenin (50 μg/g body wt) or neurotensin (28 μg/g body) are injected intraperitoneally after an overnight fast. Control mice receive either intracerebroventricular injection of aCSF or intraperitoneal injection of saline. Preweighed food is provided to mice immediately after the injection. Cumulative food

intake is measured at time points indicated in each figure up to 24 h after injection[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Cooke JH, et al. Peripheral and central administration of xenin and neurotensin suppress food intake in rodents. Obesity (Silver Spring). 2009 Jun;17(6):1135-43.

[2]. Leckstrom A, et al. Xenin, a gastrointestinal peptide, regulates feeding independent of the melanocortinsignaling pathway. Diabetes. 2009 Jan;58(1):87-94.

[3]. Kim ER, et al. Xenin delays gastric emptying rate and activates the brainstem in mice. Neurosci Lett. 2010 Aug 30;481(1):59-63.

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