
Product Data Sheet

Product Name: Angiotensin Fragment 1-7 (acetate)

Cat. No.: GC12671

Chemical Properties

Cas. No.

Chemical Name 5-L-isoleucine-1-7-angiotensin II

SMILES O=C([C@H](CC1=CNC=N1)NC([C@@]([H])(NC([C@H](CC2=CC=C(C=C2)O)NC([C@@H](NC([C@@H](NC([C@H](CC(O)=O)N)=O)CCCNC(N)=N)=O)C(C)C)=O)=O)[C@H](CC)C)=O)N3CCC[C@H]3C(O)=O.CC(O)=O

Formula $C_{41}H_{62}N_{12}O_{11} \cdot XC_2H_4O_2$ M.Wt 899Solubility $\leq 10\text{mg/ml}$ in PBS Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Angiotensin Fragment 1-7 is a type 1 angiotensin II receptor agonist.

In the renin-angiotensin system, angiotensin I is cleaved by angiotensin-converting enzyme to form angiotensin II, which has effects on fluid and electrolyte, as well as homeostasis blood pressure.

In vitro: In a previous study, peripheral atherectomy plaques collected from diabetic (DM) and 12 non-DM patients were immunostained. Results showed that the tissue contents of ACE2, angiotensin fragment 1-7, and AT1R were increased in DM when compared to non-DM. IL-6 and TNF- α were also increased in DM when compared to non-DM, as well as macrophage infiltration score and neovessel counting [1].

Caution: Product has not been fully validated for medical applications. For research use only.

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In vivo: The effects of chronic angiotensin fragment 1-7 treatment was studied in an experimental model of the metabolic syndrome, rats given high-fructose/low-magnesium diet (HFrD). After 6 months, angiotensin fragment 1-7-treated animals had lower body weight, total fat mass, and serum triglycerides, improved glucose tolerance, and better insulin sensitivity. Similar metabolic effects were also evident, albeit in the absence of weight loss, in rats first exposed to HFrD for 5 months and then subjected to short-term treatment with angiotensin fragment 1-7 [2].

Clinical trial: So far, no clinical study has been conducted.

References:

- [1] Purushothaman, K. R., Krishnan, P., Purushothaman, M., et al. Expression of angiotensin-converting enzyme 2 and its end product angiotensin 1-7 is increased in diabetic atheroma: Implications for inflammation and neovascularization. *Cardiovascular Pathology* 22, 42-48 (2013).
- [2] Marcus, Y., Shefer, G., Sasson, K., et al. Angiotensin 1-7 as means to prevent the metabolic syndrome: Lessons from the fructose-fed model. *Diabetes* 62, 1121-1130 (2013).

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