

## Product Data Sheet

### Apelin-13

<b>Cat. No.:</b>	C3633
<b>CAS No.:</b>	217082-58-1
<b>Formula:</b>	C69H111N23O16S
<b>M.Wt:</b>	1550.8
<b>Synonyms:</b>	
<b>Target:</b>	GPCR/G protein
<b>Pathway:</b>	Apelin Receptor
<b>Storage:</b>	Store at -20°C



### Solvent & Solubility

≥155.1 mg/mL in DMSO; ≥14.67 mg/mL in EtOH; ≥29.4 mg/mL in H<sub>2</sub>O

In Vitro

	Solvent Concentration	Mass	1mg	5mg	10mg
Preparing Stock Solutions	1 mM		0.6448 mL	3.2241 mL	6.4483 mL
	5 mM		0.1290 mL	0.6448 mL	1.2897 mL
	10 mM		0.0645 mL	0.3224 mL	0.6448 mL

Please refer to the solubility information to select the appropriate solvent.

### Biological Activity

Shortsummary

endogenous ligand of the APJ receptor

IC<sub>50</sub> & Target

In Vitro

#### Cell Viability Assay

Cell Line:	Vascular smooth muscle cells (VSMCs)
Preparation method:	Soluble in DMSO. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	24 h

	Applications:	Apelin-13 promoted VSMC proliferation via inducing phosphoinositide 3 kinase (PI3K)/Akt signaling transduction pathway. Apelin-13 (0.5-4 $\mu$ M) promoted the expression of phospho-PI3K and phospho-Akt in dose- and time-dependent manner. Apelin-13 promoted VSMC proliferation through PI3K/Akt signaling transduction pathway.
In Vivo	<b>Animal experiment</b>	
	Animal models:	Wistar rat, Rodent (mouse and rat) models of myocardial I/R injury
	Dosage form:	Intracerebroventricular (ICV) administration, intravenous (IV) injection of 10 nmol
	Applications:	In rats, Apelin-13 had little effect on food intake, but dose-dependently increased drinking behaviour and water intake at 1 h. Apelin-13 (10 nmol) increased water intake. Apelin-13 (10 nmol) significantly increased plasma ACTH and corticosterone and decreased plasma prolactin, LH and FSH at 30 min. In rodent (mouse and rat) models of myocardial I/R injury, apelin-13 reduced infarct size by 43.1% and 32.7%. Intracerebroventricular (ICV) injection of 1 and 3 nmol of apelin-13 resulted in a reduction in food intake in both fed and fasted rats.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

## Product Citations

See more customer validations on [www.apexbt.com](http://www.apexbt.com).

## References

- [1]. Liu C, Su T, Li F, et al. PI3K/Akt signaling transduction pathway is involved in rat vascular smooth muscle cell proliferation induced by apelin-13[J]. Acta Biochim Biophys Sin, 2010, 42(6): 396-402.
- [2]. Taheri S, Murphy K, Cohen M, et al. The effects of centrally administered apelin-13 on food intake, water intake and pituitary hormone release in rats[J]. Biochemical and biophysical research communications, 2002, 291(5): 1208-1212.
- [3]. Simpkin J C, Yellon D M, Davidson S M, et al. Apelin-13 and apelin-36 exhibit direct cardioprotective activity against ischemiareperfusion injury[J]. Basic research in cardiology, 2007, 102(6): 518.
- [4]. Sunter D, Hewson A K, Dickson S L. Intracerebroventricular injection of apelin-13 reduces food intake in the rat[J]. Neuroscience letters, 2003, 353(1): 1-4.

## Caution

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**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*

**APExBIO Technology**

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