(Gly14)-Humanin (human)

Cat. No.:	HY-P3993
CAS No.:	330936-70-4
Molecular Formula:	$C_{118}H_{202}N_{34}O_{31}S_2$
Molecular Weight:	2657.21
Sequence Shortening:	MAPRGFSCLLLLTGEIDLPVKRRA
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

(Gly14)-Humanin (human) (14-Glycine-Humanin (human)) is an analog of Humanin in which the 14th amino acid serine was replaced with glycine (Gly). (Gly14)-Humanin (human) has anti-apoptotic and neuroprotective functions[1][2].

In Vitro

(Gly14)-Humanin (human) (0.1-10 μM; 72 hours) significantly increases cell viability, reduced nuclear fluorescence of HUVECs, the levels of cleaved PARP, ROS formation and the ratio of bax/bcl-2 compared with treatment with high glucose (HG) for 72h. And reduces mRNA level of bax and increases mRNA level of bcl-2[1].

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

Cell Viability Assay[1]

Cell Line:	Human umbilical vein endothelial cells (HUVECs)
Concentration:	100 nM, 1 μM and 10 μM
Incubation Time:	Pretreatment 3 hours and then treated with 72 hours
Result:	Significantly increased cell viability.

Western Blot Analysis[1]

Cell Line:	Human umbilical vein endothelial cells (HUVECs)
Concentration:	1 μM
Incubation Time:	Pretreatment 3 hours and then treated with 72 hours
Result:	Reduced the ratio of bax/bcl-2.

In Vivo

(Gly14)-Humanin (human) (0.1 μg/5 μL; i.c.v.; once) decreases cells with plasmalemma permeability in the injured cortex and hippocampus, reduces brain lesion volume, improves motor performance and ameliorates performance in the Morris water maze test[2].

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Animal Model:	Adult male CD-1 mice (25-30 g; 10-12-week-old) bearing traumatic brain injury (TBI)[2]

Dosage:	0.1 μg/5 μL
Administration:	Intracerebroventricularly (i.c.v.); once
Result:	Decreased cells with plasmalemma permeability in the injured cortex and hippocampus, reduced brain lesion volume, improved motor performance.

REFERENCES

[1]. Ying Xie, et al. Protection effect of [Gly14]-Humanin from apoptosis induced by high glucose in human umbilical vein endothelial cells. Diabetes Res Clin Pract. 2014 Dec;106(3):560-6.

[2]. T Wang, et al. [Gly14]-Humanin reduces histopathology and improves functional outcome after traumatic brain injury in mice. Neuroscience. 2013 Feb 12;231:70-81.

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