

Hepcidin-1 (mouse)

Cat. No.:	HY-P4373
CAS No.:	1676104-75-8
Molecular Formula:	C ₁₁₁ H ₁₆₉ N ₃₁ O ₃₅ S ₈
Molecular Weight:	2754.24
Sequence:	Asp-Thr-Asn-Phe-Pro-Ile-Cys-Ile-Phe-Cys-Cys-Lys-Cys-Cys-Asn-Asn-Ser-Gln-Cys-Gly-Ile-Cys-Cys-Lys-Thr (Disulfide bridge: Cys7-Cys23,Cys10-Cys22,Cys11-Cys19,Cys13-Cys14)
Sequence Shortening:	DTNFPICIFCKCCNNSQCGICCKT (Disulfide bridge: Cys7-Cys23,Cys10-Cys22,Cys11-Cys19,Cys13-Cys14)
Target:	Cathepsin; MMP
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Hepcidin-1 (mouse) is an endogenous peptide hormone involved in the regulation of iron homeostasis. Hepcidin-1 (mouse) upregulates mRNA levels of TRAP, cathepsin K, and MMP-9 and increases TRAP-5b protein secretion. Hepcidin-1 (mouse) downregulates the level of FPN1 protein and increases intracellular iron. Hepcidin-1 (mouse) facilitates osteoclast differentiation ^[1] .															
IC₅₀ & Target	MMP-9	cathepsin K														
In Vitro	<p>Hepcidin-1 mouse (200-800 nM, 4 days) facilitates RANKL (50 ng/mL)-induced differentiation of raw264.7 cells^[1]. Hepcidin-1 mouse (0-800 nM, 4 days) up-regulates the expression of TRAP, CTK, and MMP-9 mRNA^[1]. Hepcidin-1 mouse (0-800 nM, 20 h) increases the Level of Trap-5b protein and decreased Ferroportin 1 (FPN1) protein in RAW264.7 cells^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>RAW264.7 cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 200, 400, or 800 nM</td> </tr> <tr> <td>Incubation Time:</td> <td>20 h</td> </tr> <tr> <td>Result:</td> <td>Decreased Ferroportin 1 (FPN1) protein.</td> </tr> </table> <p>Real Time qPCR^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>RAW264.7 cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 200, 400, or 800 nM</td> </tr> <tr> <td>Incubation Time:</td> <td>4 days</td> </tr> </table>		Cell Line:	RAW264.7 cells	Concentration:	0, 200, 400, or 800 nM	Incubation Time:	20 h	Result:	Decreased Ferroportin 1 (FPN1) protein.	Cell Line:	RAW264.7 cells	Concentration:	0, 200, 400, or 800 nM	Incubation Time:	4 days
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Result:	Increased the gene expression of TRAP, CTK, and MMP-9 in a dose-dependent manner.
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REFERENCES

[1]. Zhao GY, et al. Effects of mouse hepcidin 1 treatment on osteoclast differentiation and intracellular iron concentration. *Inflammation*. 2015 Apr;38(2):718-27.

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

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