

Hepcidin assays for research purposes in animal models and cell lysates.

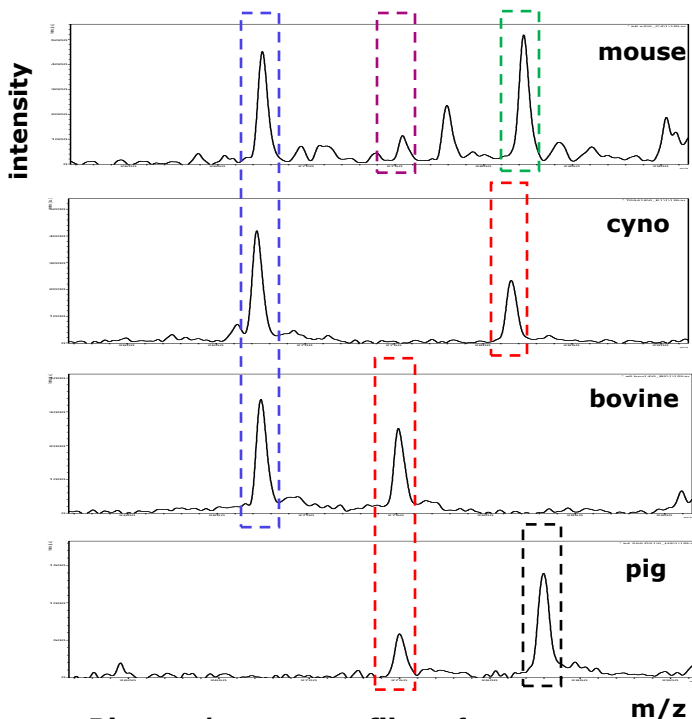
Method

The assay is based on a combination of weak cation exchange chromatography and time-of-flight mass spectrometry. An internal standard (IS), heavy human hepcidin-25⁺⁴⁰ or hepcidin analogue is used for semi-quantification.

species	hepcidin	material	Mass (Da)	amino acid sequence	validated	reference
Mouse	Hep-1	plasma, serum	2754.2	DTNFPICIFC CKCCNNSQCG ICCKT	Yes	1, 2
Mouse	Hep-2	urine, serum	2821.3	DINFPICRF C QCCNKPS CG ICCEE	Yes	1, 2
Cynomolgus monkey	Hep-25	plasma, serum	2817.4	DTHFPICIFC CGCCHRSKCG MCCRT	Yes	5
Pig	Hep-25	serum, urine	2749.4	DTHFPICIFC CGCCRKAICG MCCKT	Yes	3,4
Bovine	Hep-25	plasma	2751.4	DTHFPICIFC CGCCRKGT CG MCCRT	Yes	
Rat	Hep-25	urine	2712.3	DTNFPICLFC CKCKNSSCG LCCTIT	No*	
Dog	Hep-25	serum	2779.4	DTHFPICIFC CGCCKTPKCG FCCRT	No*	
Human	Hep-25	Cell lysate	2789.4	DTHFPICIFC CGCCHRSKCG MCCKT	Yes	6

*, hepcidin can be detected, but assay is not formally validated

Table: Overview hepcidin in different species.



Plasma/serum profiles of
mouse Hep-1, Hep-2, IS hHep-24,
cyno Hep-25, IS hHep-24,
bovine Hep-25, IS hHep-24 and
pig Hep-25, IS hHeavy Hep-25⁺⁴⁰.

References

1. Tjalsma, Laarakkers *et al* (2011) PLoS ONE 6(3):e16762
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3. Staron *et al* (2015) PLoS ONE 10:e0136695
4. Starzynski *et al* (2013) PLoS ONE 5:e64022
5. Schwoebel, *et al.* (2013). Blood. 121:2311-2315.
6. Kartikasari *et al* (2008) Biochim Biophys Acta 12:2029-2037

