

Hepcidin (Hepc) Antibodies

Cat. # HEPC12-S	Rabbit Anti-Human HEPC antiserum	SIZE: 100 ul
Cat. # HEPC12-A	Rabbit Anti-Human HEPC IgG (aff pure)	SIZE: 100 ug
Cat. # HEPC12-P	Human HEPC Control/blocking peptide	SIZE: 100 ug

Hepcidin (Hepc, hepatic bactericidal protein) or LEAP (liver expressed antimicrobial peptide) is small, cysteine-rich peptide, antimicrobial peptide similar to defensins and thionins. Hepcidin (unprocessed, proprotein in mouse 83 aa, rat/human 84 aa) are almost exclusively produced in liver. Human hepcidin is produced from 84-aa precursor, including a putative 24-aa signal peptide. The secreted form of hepcidin in blood and urine is consists of C-terminal 20, 22 or 25-aa residues. The link between hepcidins and iron metabolism is that hepcidin expression is abolished in mice exhibiting iron-overload due to the targeted disruption of **USF2 (upstream stimulatory factor 2)** gene resembling the situation in hfe^{-/-} mice. The human gene is located at chromosome 19, in close proximity with Usf2 gene. Hepcidin levels are increased in iron loading and in beta-2 microglobulin knockout mice. Hepcidins are devoid of IRE. Like other antimicrobial peptides, hepcidin is upregulated by lipopolysaccharides (LPS).

Source of Antigen and Antibodies

Antigen	13-aa peptide from mature human HEPC (1); Designated # HEPC12-P, control/blocking peptide conjugated to KLH; epitope location ~ C-terminus
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#HEPC12-S) and IgG, purified over antigen-agarose (Cat # HEPC12-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -200C and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for antiserum and 1-10 ug/ml for aff. pure IgG using ECL. See published refs 2..

ELISA (1:100K; using 50-100 ng control peptide/well).

Histochemistry & Immunofluorescence: See published refs 2.

Specificity & Cross-reactivity

The Human HEPC12-P sequence is conserved in all 3 human HEPC peptides (20-, 22- and 25-aa C-terminal fragments). Therefore, HEPC12-P antibody will detect all 3 processed forms of human HEPC. It is 69% conserved in mouse, and 61% in rat HEPC. Anti-HEPC12-P could potentially react with the unprocessed larger 60-aa pro-HEPC if present in the samples or tissues. Antibody cross-reactivity in various species has not been studied. We recommend the use of cat # HEPC11-S for the detection of mouse/rat HEPC. Full length, human 25-aa (cat # HEPC61-P) and 20-aa HEPC (cat # HEPC71-P) and mouse 25-aa HEPC (cat # HEPC-81) are also available for various studies. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at the web site).

General References: (1). Pigeon C et al (2001) JBC 276, 7811-7819; Park CH et al (2001) JBC 276, 7806-7810, Krause A et al (2000) FEBS Lett. 480, 147-150; Fleming RE and Sly WS (2001) PNAS 99, 8160-8162; Nicolas G et al (2002) PNAS 99, 4596-4601

Citations of for ADI Antibodies (see updated list at the web site)

Duvigneau JC, 2007, Laboratory Investigation in press, , Dallalio G, 2003, British J. Haematol. 122, 996-1000, WB, Peyssonnaud C, 2007, J. Clin. Invest., Jul 2007; 117: 1926, IHC Sow FB, 2007, J. Leukoc. Biol., Oct 2007; 82: 934 - 945. , WB, Peyssonnaud C, 2006, Blood, May 2006; 107: 3727 - 3732, WB, IF Huang Y-S, 2006, Pediatr. Res., May 2006; 59: 662 - 666. , IHC

*This product is for in vitro research use only.

Some New Antibodies from ADI...

IRP1-2, HFE, Frataxin, Hepcidin, Hephaestin, NRAMPs, USF2, Ferritin, Light and heavy chains, ferritin and B2-M ELISA, Tfr1-2,

HEPC12-S-A-P

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