New Hepcidin 25 (bioactive) HS

The gold standard in Hepcidin measurement
Available fully automated on our DRG-HYBRID-XL, a Random Access Analyzer for Immunoassay and Clinical Chemistry or in the classical ELISA format.

**Hepcidin Patents**
- **Product Patented**
  - PE Number: 840,3336.8
  - US: 8,040,302 B2
  - EP: 236,549 A1

**Benefits**
- Easy and straightforward sample preparation
- No centrifugation or heating
- Total assay time: 3 hours
- High sensitivity
- Good correlation to Plasmid Hematometry
- Two controls included in the kit

**Methodology**
- The DRG-Hepcidin25 fluorescent manual and hybrid assays are solid phase based immunometric assays (ELISA) based on the principle of sandwich blinding. The microplate wells are coated with a monoclonal (monoclonally directed towards an epitope site of the hepcidin59NBS371-peptide). The activated Hepcidin25 of a patient sample competes with a Polybound-Dotinulin conjugate (Eugene Conjugates) for binding to the coated antibodies. After addition of the substrate solution, the intensity of the bound enzyme activity is inversely proportional to the concentration of Hepcidin 25 in the test sample.

**Background**
Hepcidin is an iron homeostasis hormone regulator peptide. The bioactive peptide Hepcidin-25 is generated predominantly in the liver by proteolytic degradation of the preprocollagen 25 amino acid propeptide. Subsequent mature secreted Hepcidin-25 results in smaller peptides of 21-24 amino acids that show reduced activity and autonomy in the urine (Figure 7).

**Clinical relevance**
Serum Hepcidin-25 levels have been shown to add value to identify and differentiate specific disease conditions. Hepcidin-25 deficiency causes hereditary hemochromatosis, characterized by body iron excess that may progress to liver fibrosis. In addition, low Hepcidin-25 concentrations can be induced by several disorders, including anemia and chronic kidney disease, C. To identify high Hepcidin-25 levels has been found in inherited iron deficiency anemia, during infection, chronic kidney diseases, and after iron therapy, suggesting its high diagnostic significance among others.

**Example of a typical standard curve**

### Hepcidin 25 (bioactive) HS ELISA

A high sensitive, fast and user-friendly ELISA for the quantification of Hepcidin-25 in human serum and plasma.

**Ordering informations**
- **Product Code**
  - Hepcidin ELISA (HS ELISA)

**Intended use**
- The DRG-Hepcidin HS ELISA is an in vitro immunoassay for the quantitative determination of Hepcidin in serum and plasma.

**Assay characteristics**
- **Assay Principle**: Competitive ELISA
- **Sensitivity**: Limit of detection (LOD): 0.113 ng/mL
- **Limit of Assay**: 0.633 ng/mL
- **Linearity**: Between 3.83 - 816 ng/mL
- **Total Assay time**: 4-6 hours
- **Sample Volume**: 50-100 µL of serum or plasma
- **Plate Reading**: 340 nm of absorbance
- **Plate Assay Precision**: 1.691 %
- **Plate Inter Assay Precision**: 1.691 %

**Method comparison**
- DRG-Hepcidin ELISA shows good correlation to LIAISON:
  - N=30, r²=0.96, p<0.0001, R²=0.8729

**Linearity**
- **Concentration (ng/mL)**: 100, 31.6, 10.5
- **Absorbance**: 0.185, 0.106, 0.046
- **Range of Linearity**: 3.83 - 816 ng/mL

**Recovery**
- **Concentration (ng/mL)**: 100, 31.6, 10.5
- **Absorbance**: 0.185, 0.106, 0.046
- **Range of Linearity**: 3.83 - 816 ng/mL

**Sensitivity**
- **Limit of Detection**: 0.113 ng/mL
- **Limit of Assay**: 0.633 ng/mL

**Efficiency**
- **Free sample (n=18)**: 20.2% ± 3.0% RSD
- **Processed sample (n=18)**: 19.2% ± 3.1% RSD

**Certification**
- **Reference**: 30-14 ng/mL
- **Control Solutions**: 50-180 ng/mL
- **Range of Standardization**: 30-14 ng/mL
- **Control Solution**: 50-14 ng/mL

**Limit of Detection**: 0.113 ng/mL

**Limit of Assay**: 0.633 ng/mL