Mouse/Rat- Growth Hormone ELISA E023

Growth Hormone, Insulin-like Growth Factors and their binding proteins build up an endocrine system regulating not only longitudinal growth in humans but also influencing a broad variety of other physiological and pathophysiological processes like energy metabolism or tumor growth. Most effects of Growth Hormone (GH) are exerted by Insulin-like Growth Factors (IGF) mainly produced by the liver but also locally by specific tissues.

It is well known that rat and mice can be used as model organisms in preclinical research, e.g. for studying the relevance of growth hormone in calorie restriction and aging as well as in epigenetics and growth metabolism.

We offer a highly sensitive and specific test system which is able to detect growth hormone independent of the growth hormone binding protein. Cross reactivity with other pituitary hormones was not detectable for: Prolactin, TSH, FSH and LH.

To use this product in research projects it is important to bear in mind, that growth hormone is pulsatile secreted by the pituitary. Thus, experimental setting, specially sampling time is of importance.

Beside serum, cell culture supernatants of murine or rat cell cultures as well as cell extracts can be used for rGH measurement by this assay.

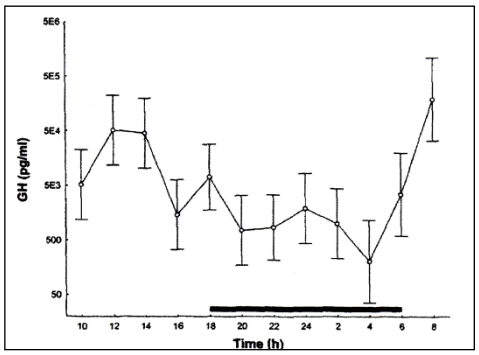

Fig. 1 Circadian profile of rat GH. In Vivo 24:827-836; 2010

This enzyme immunoassay kit is suited for measuring **Growth Hormone in mouse and rat specimens** like serum or cell culture supernatants.

The Mediagnost ELISA for mouse/rat Growth Hormone (m/rGH) E023 is a so-called Sandwich-assay based on specific polyclonal guinea pig and goat antibodies.

The Growth Hormone in the sample binds to the immobilized antibody on the microtiter plate. In the following step, the biotinylated and Streptavidin-Peroxidase conjugated specific anti-rat GH-Antibody binds in turn to the immobilised rGH.

The peroxidase will convert the dye and the resulting colour intensity is depending on the concentration of m/rGH in the samples.

Highly purified recombinant rat GH is used for calibration and allows reproducible measurements of GH in mass units.

Assay Characteristics
Mediagnost MOUSE/RAT-Growth Hormone E023

- ✓ Recombinant rat GH Standard 0.15 – 9.0 ng/mL
- ✓ Analytical sensitivity of Ø < 0.04 µg/L
- ✓ Low cross-reactivity to related proteins
- ✓ Linearity given for sample dilutions of 1:2.5 to 1:30
- ✓ Low sample volume: Recommended dilution of 1:5 results in 20 µL sample volume

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Mediagnost mouse/rat Growth Hormone ELISA E023

Preparation of reagents:		Reconstitution:	Dilution:
A-G	**Standards**	in **1 mL** Dilution Buffer **VP**	-
KS1	**Control Serum 1**	in **150 µL** Dilution Buffer **VP**	**1:5** with Dilution Buffer **VP**
KS2	**Control Serum 2**	in **150 µL** Dilution Buffer **VP**	**1:5** with Dilution Buffer **VP**
WP	**Washing Buffer**	-	**1:20** with **Aqua dest.**
Sample and Control Sera KS1 and KS2: dilute 1:5 with Dilution Buffer **VP**, **mix immediately, incubate max. 60 min**. **Use 100 µL** for each well in the assay.			
Before assay procedure bring all reagents to room temperature **20-25°C.**			

Assay Procedure in Double Determination:		
Pipette	**Reagents**	**Position**
100 µL	Dilution Buffer **VP** (Blank)	A1/A2
100 µL	Standard **A** (**0.15 ng/mL**)	B1/B2
100 µL	Standard **B (0.45 ng/mL**)	C1/C2
100 µL	Standard **C** (**0.90 ng/mL**)	D1/D2
100 µL	Standard **D** (**1.8 ng/mL**)	E1/E2
100 µL	Standard **E** (**3.6 ng/mL**)	F1/F2
100 µL	Standard **F** (**6.0 ng/mL**)	G1/G2
100 µL	Standard **G** (**9.0 ng/mL**)	H1/H2
100 µL	Control Serum **KS1** (1:5 diluted)	A3/A4
100 µL	Control Serum **KS2** (1:5 diluted)	B3/A4
100 µL	Sample (1:5 diluted)	in the rest of the wells according the requirements
Cover the wells with the sealing tape.		
Sample Incubation: 1 h at 20-25°C, 350 rpm		
5x 300 µL	Aspirate the contents of the wells and wash **5x** with **300 µL** each Washing Buffer WP/ well.	In each well
100 µL	Antibody Conjugate **AK**	In each well
Cover the wells with the sealing tape.		
Incubation: 1 h at 20-25°C, 350 rpm		
5x 300 µL	Aspirate the contents of the wells and wash **5x** with **300 µL** each Washing Buffer **WP/ well**.	In each well
100 µL	Enzyme Conjugate **EK**	In each well
Mit Klebefolie die Vertiefungen dicht abdecken.		
Incubation: 0.5 h at 20-25°C, 350 rpm		
5x 300 µL	Aspirate the contents of the wells and wash **5x** with **300 µL** each Washing Buffer **WP/ well**.	In each well
100 µL	Substrate Solution **S**	In each well
Substrat S Incubation: 0.5 h in the Dark at 20-25°C		
100 µL	Stopping Solution **SL**	In each well
Measure the absorbance within **30 min** at **450 nm** with **≥ 590 nm** as reference wavelength.		

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