Gesellschaft für Forschung und Herstellung von Diagnostika GmbH

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Growth Factor Measurement in Animals!

Rat- / Mouse-IGF-I ELISA E25
Rat- / Mouse-IGFBP-2 ELISA E08
Rat- / Mouse-IGFBP-3 ELISA E031

Mediagnost developed these test systems as tools for the investigation of the IGF-System in mice and rat models e.g. in research and pre-clinical studies

Mus musculus Source: Wikipedia

Mediagnost Rat- / Mouse-IGF-I ELISA (E25)

The IGF-I ELISA (Insulin-like growth factor-I) measures quantiatively the content of murine and rat IGF-I in **serum** and **plasma** sample solutions as well as in **cell culture medium**.

IGF-I is a major biomarker used in diagnosis of growth disorders like idiopathic short stature but also in acromegaly. To elucidate the role of IGF-I in malignancies, short stature or other diseases mice and rats are used as model organims.

This ELISA allows the reliable and precise measurement of IGF-I in mouse and rat samples.

Assay characteristics E25:

- ✓ highly specific for IGF-I, no crossreactivity to IGF-II
- ✓ single standards: 0.5, 2.5, 6, 12, 18 ng/ml recombinant IGF-I
- ✓ 5% intra-assay variation
- ✓ sensitivity of 0.029 ng/ml
- ✓ linear range from 1:50 - 1:800 dilution
- ✓ low sample volume required: standard dilution of 1:100
- ✓ control sera included

Mediagnost Rat- / Mouse-IGFBP-3 EIA (E031)

The IGFBP-3 ELISA (Insulin-like Growth-Factor Binding Protein-3) is very well suited for determination of IGFBP-3 concentration in **serum** and **plasma** sample solutions of mice and rats.

IGFBP-3 is the one of the key parameters in diagnosis of growth failure. But beside its role in growth physiology IGFBP-3 influences several physiological and pathological processes, e.g. in tumor biology. Therefore several mouse model systems have been established for investigation of IGFBP-3.

This ELISA allows the reliable and precise measurement of IGFBP-3 in mouse and rat samples.

Assay characteristics E031:

- ✓ only small sample volumes necessary (recommended dilution 1:505)
- ✓ low variance: inter- and intra-assay variation ø < 10%
- ✓ 7 single standards of recombinant mouse IGFBP-3: 0.39 - 25 ng/ml
- ✓ sensitivity of 0.09 ng/ml
- ✓ linear range from 1:100 - 1:3200 dilution
- ✓ control sera included

Mediagnost MOUSE- / RAT-IGFBP-2 E08

The Mediagnost mouse IGFBP-2 assay provides an excellent tool for quantitative determination of murine and rat IGFBP-2 in **serum** and **plasma** samples. Specially designed for murine research smallest amounts of serum **(2.5 µl for duplicates)** allow exact determination of IGFBP-2 concentration (recommended sample dilution 1:100).

Assay characteristics E08:

- ✓ 7 single standards (31.25 - 2000 pg/ml) of recombinant mouse IGFBP-2
- ✓ contains antibodies against whole mouse- and rat-IGFBP-2
- ✓ analytical sensitivity of 0.01 ng/ml
- ✓ intra- and interassay variance <10%
- ✓ control serum included
- ✓ linearity shown for 1:5 – 1:320 dilution

Mediagnost Gesellschaft für Forschung und Herstellung von Diagnostika GmbH Aspenhaustr 25 72770 Reutlingen Deutschland
+49 7121 51 4840 - www.mediagnost.de - contact@mediagnost.de

Mediagnost MOUSE- / RAT-IGF-I ELISA E25

Assay Procedure for Double Determinations:

Reconstitution / Dilution of Reagents		
Standards A-E	Reconstitution in **Sample Buffer PP**	**1 ml**
Control Serum KS1	Reconstitution in **Sample Buffer PP**	**500 µl**
Control Serum KS2	Reconstitution in **Sample Buffer PP**	**500 µl**
Wash Buffer WP	dilute in **A. dest.** (e.g. total volume of 50 ml in a graduated flask and fill up to 1000 ml)	**1:20**
Sample + Control Sera KS1 and KS2: dilute 1:100 in Sample Buffer PP, mix immediately, incubate at least for 15 min, max. 2h. Use 50 µl for each well in the assay.		
Before conducting the assay equilibrate all **reagents to room temperature.**		

Assay Procedure for Double Determinations:

Pipette	**Reagent**	**Position**
50 µl	Antibody Conjugate **AK**	in **all** wells used
50 µl	Sample Buffer **PP** (blank)	A1 and A2
50 µl	Standard **A** (**0.5 ng/ml**)	B1 and B2
50 µl	Standard **B** (**2.5 ng/ml**)	C1 and C2
50 µl	Standard **C** (**6 ng/ml**)	D1 and D2
50 µl	Standard **D** (**12 ng/ml**)	E1 and E2
50 µl	Standard **E** (**18 ng/ml**)	F1 and F2
50 µl	Control Serum **KS1**	G1 and G2
50 µl	Control Serum **KS2**	H1 and H2
50 µl	Samples	following wells
Cover the wells with the sealing tape.		
Incubation: 1 h at RT, 350 rpm		
5x 300 µl	Aspirate the contents of the wells and wash **5x** with **300 µl Wash Buffer WP**	each well
100 µl	Enzyme Conjugate **EK**	each well
Incubation: 30 min at RT, 350 rpm		
5x 300 µl	Aspirate the contents of the wells and wash **5x** with **300 µl Wash Buffer WP**	each well
100 µl	Substrate **S**	each well
Incubation: 30min in the dark RT		
100 µl	Stop Solution **SL**	each well
Measure the absorbance within **30 min** at **450 nm** with **≥ 590 nm** as reference wavelength.		

Mediagnost Rat- /Mouse-IGFBP-2 ELISA E08

Assay Procedure in Double Determination:

Preparation of reagents:		**Reconstitution:**	**Dilution:**
Before assay procedure bring all reagents to room temperature **20-25°C.**			
A-G	**Standards**	in **1 mL** Dilution Buffer **VP**	-
KS	**Control Serum**	in **250 µL** Dilution Buffer **VP**	**1:100** with Dilution Buffer **VP**
AK	**Antbody Conjugate**	-	**1:100** with Dilution Buffer **VP**
EK	**Enzyme Conjugate**	-	**1:100** with Dilution Buffer **VP**
WP	**Washing Buffer**	-	**1:20** with **Aqua dest.**
Sample dilution: with Dilution Buffer **VP 1:100**			

Pipettie	**Reagenzien**	**Position**
100 µL	Dilution Buffer **VP** (Blank)	A1/A2
100 µL	Standard **A** (**31.25 pg/mL**)	B1/B2
100 µL	Standard **B** (**62.5 pg/mL**)	C1/C2
100 µL	Standard **C** (**125 pg/mL**)	D1/D2
100 µL	Standard **D** (**250 pg/mL**)	E1/E2
100 µL	Standard **E** (**500 pg/mL**)	F1/F2
100 µL	Standard **F** (**1000 pg/mL**)	G1/G2
100 µL	Standard **G** (**2000 pg/mL**)	H1/H2
100 µL	Control Serum (1:100 diluted)	A3/A4
100 µL	Sample (1:100 diluted)	in the rest of the wells according the
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 **5 x** with **300 µL** each Washing Buffer WP/ well.	In each well
100 µL	Antibody Conjugate **AK (1:100 diluted)**	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 **5 x** with **300 µL** each Washing Buffer **WP/ well**.	In each well
100 µL	Enzyme Conjugate **EK (1:100 diluted)**	In each well
Cover the wells with the sealing tape.		
Incubation: 0.5 h at 20-25°C, 350 rpm		
5x 300 µL	Aspirate the contents of the wells and wash **5 x** 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 jede Vertiefung
Measure the absorbance within 30 min at **450 nm** with ≥ 590 nm as reference wavelength.		

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