mediagnost®
Gesellschaft für Forschung und Herstellung von Diagnostika GmbH
Quality made in Germany

Insulin-like Growth Factor-II ELISA E30 / RIA R30

Insulin-like growth factors (IGF) -I and -II play a pivotal role in regulating the proliferation, differentiation and specific functions of many cell types. IGF-II has a molecular weight of 7469 Da and shares about 60% amino acid homology with IGF-I. IGF-II is bound by the IGF-I receptor as well as by the Mannose-6-phosphate receptor.

Physiological function of IGF-II is manifold. It is involved in several growth and maturation processes, it stimulates cell division and cell differentiation in target tissues. In human serum IGF-II is bound to its binding proteins.

Clinical Relevance
Scientific investigations in the field of neonatal hypertrophy (IGF-II is a foetal growth factor) and malignancies (IGF-II is a monogenic growth factor).

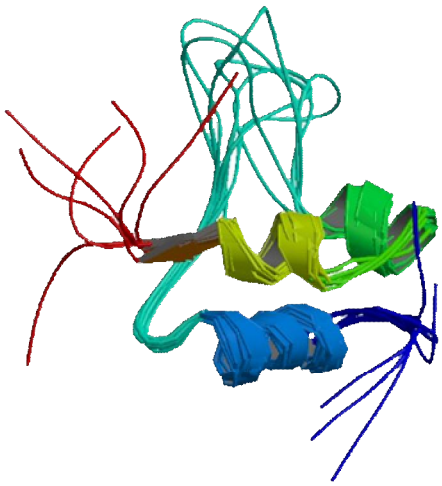
IGF-II seems to be of use in differential diagnostics of malignancies. Thus, it is possible to differentiate by IGF-II between adrenocortical carcinomas and adenomas. Further tumor staging and differentiation between hyperplasia and carcinoma can be improved by IGF-II measurements in prostate tumors. The IGF-System seem to be of relevance in neuro-degeneration as well, e.g. Alzheimer´s and Parkinson's diseases.

Mediagnost IGF-II Assays

Our IGF-II assays are suited for measuring IGF-II in human **serum, and other human biological fluids** (e.g. follicular fluid) or cell culture supernatants and are **calibrated against** the international standard of the WHO (**WHO NIBSC 96/538)**.
No cross reactivity to other components of the IGF system of relevance is known.
Small sample requirement is ideal for use in paediatrics.

This assay is easy, fast and results **do not depend on the binding protein concentration** of the sample. It is based on the high specificity of the employed antibodies for IGF-II.

There is virtually no cross-reactivity with IGF-I. This allows the separation of IGF-II from the binding proteins **by acidification and blocking of the free binding proteins** with IGF-I. Thus, the endogenous IGF-II is free in solution.



PDB Model of IGF2 (www.pdb.org)

Mediagnost IGF-II ELISA is produced according EC Directive 98/79EG **(** 0 **)** and thus have the **European Approval for Clinical Diagnostics.**

Assay Features ELISA E30

- ü **No extraction required because of IGF-I excess!**
- ü Incubation time of 3h only
- ü Analytical sensitivity of **0.02 ng/ml**
- ü 5 single standards included (0.45 - 9 ng/ml)
- ü Assay range **0.02 to 3600 ng/ml** (with recommended dilution)
- ü 2 human native control sera included
- ü minimal cross-reactivity to IGF-I

Assay Features RIA R30

- ü **No extraction required because of IGF-I excess!**
- ü Incubation time 2 days and 1.5 h
- ü Analytical sensitivity of **0.1 ng/ml**
- ü 8 single standards included (0.4-50 ng/ml)
- ü Assay range **0.1 to 5050 ng/ml** (with recommended dilution)
- ü 2 human native control sera included
- ü Minimal cross-reactivity to IGF-I

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

Mediagnost IGF-II ELISA E30

Reconstitution / Dilution of Reagents		
Standards A-E	Reconstitution in **Sample Buffer PP**	**500 µl**
Control Serum KS1	Reconstitution in **Sample Buffer PP**	**250 µl**
Control Serum KS2	Reconstitution in **Sample Buffer PP**	**250 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 1:401 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.**

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** (**0.45 ng/ml**)	B1 and B2
50 µl	Standard **B** (**1.5 ng/ml**)	C1 and C2
50 µl	Standard **C** (**3 ng/ml**)	D1 and D2
50 µl	Standard **D** (**5.63 ng/ml**)	E1 and E2
50 µl	Standard **E** (**9 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: 2 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: 30 min 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.		

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