



IGF Binding Proteins and Related Reagents

Prepared by Dr. Stephen Hardy, GroPep Limited

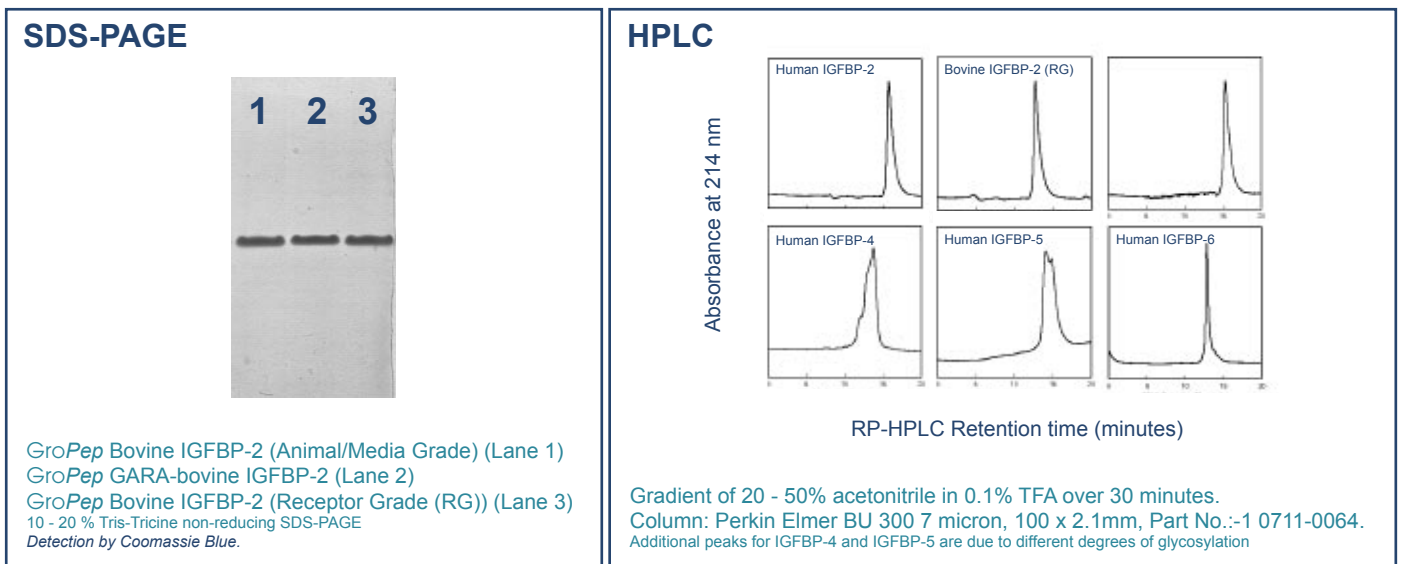
IGF Binding Proteins (IGFBPs) are a family of circulating proteins which bind Insulin-like Growth Factors-I and -II with high affinity. The IGFBPs modulate the metabolic and mitogenic effects of IGF-I and IGF-II by controlling the distribution, function and activity of the IGFs in various tissues and body fluids. IGFBPs also have direct, IGF-independent activities, that control cell migration and proliferation.

As always, GroPep is at the forefront of developments in the IGF field by offering a comprehensive range of IGFBPs, antibodies and related reagents to researchers and biotechnologists.

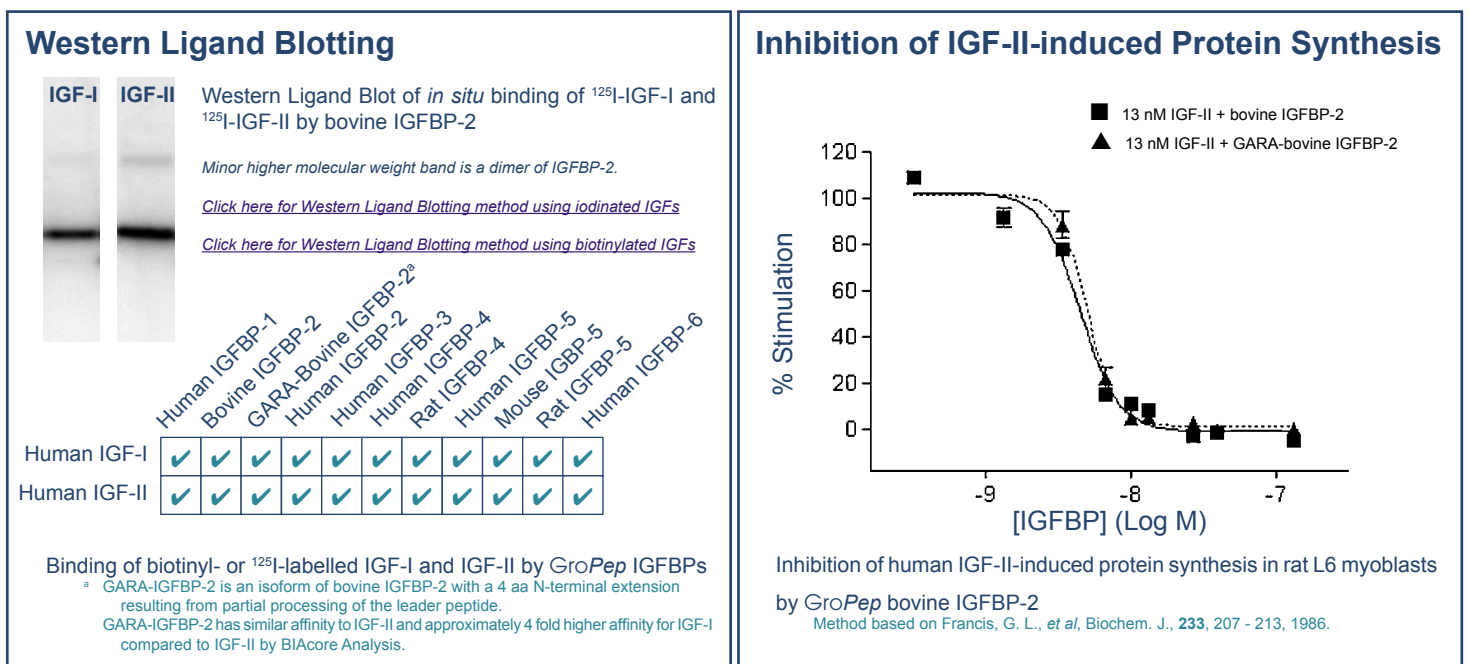
This document details the IGFBP-related reagents currently available from GroPep and some of their properties. [Technical Bulletin 8](#) reviews the current state of IGFBP research and is available on the GroPep website (www.gropep.com.au).

For specifications, vial sizes and retail pricing on any of these reagents, click on the product title.

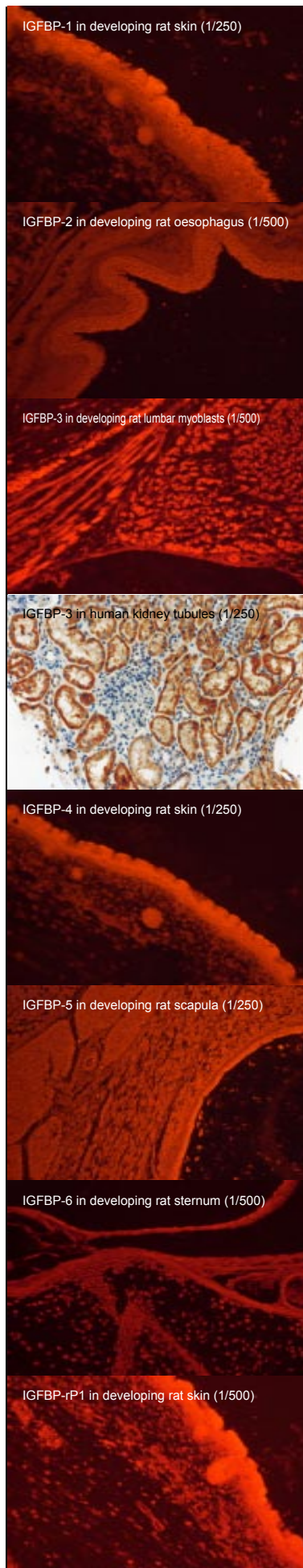
GroPep's IGFBPs are pure:



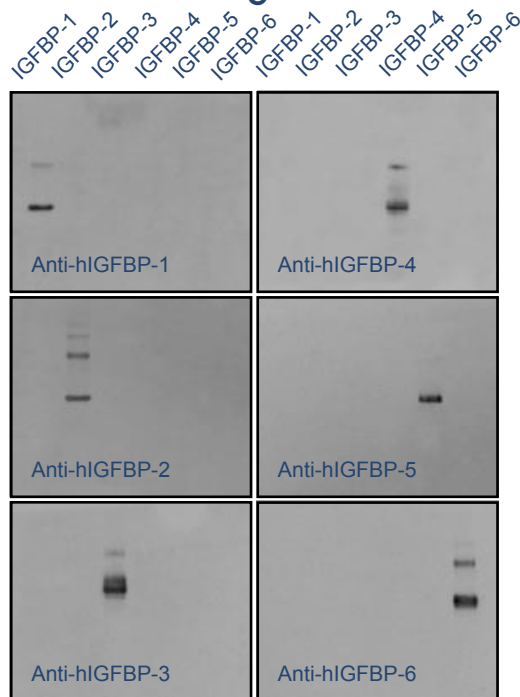
GroPep's IGFBPs are biologically active:



GroPep's IGFBP Antibodies are specific:



Western Immunoblotting of human IGFBPs:



◆ GroPep human IGFBPs separated by SDS-PAGE
(10 % - 20 % Tricine, non-reducing)

◆ Probed with each GroPep anti-human IGFBP antisera (1/1000)

Anti-human IGFBP-1	Code: PAP1	(EIA: 1/1,000)
Anti-human IGFBP-2	Code: PAQ1	(EIA: 1/5,000)
Anti-human IGFBP-3	Code: PAV1	(EIA: 1/65,000)
Anti-human IGFBP-4	Code: PAR1	(EIA: 1/1,000)
Anti-human IGFBP-5	Code: PAZ1	(EIA: 1/50,000)
Anti-human IGFBP-6	Code: PAU1	(EIA: 1/35,000)
Anti-human IGFBP-rP1	Code: PAAW1	(EIA: 1/150,000) - not shown

All supplied as 100 µl lyophilised aliquots for US\$220

Detection by ECL.

Minor higher MW bands are multimeric forms of the IGFBPs.

[Click here to view a Western Immunoblotting protocol using these antisera](#)

Purified IGFBP Antibodies (IgG) for immunohistochemistry:

- ◆ Developed specifically for IGFBP immunohistochemistry.
- ◆ Highly specific. Recognise human and rat IGFBPs.
- ◆ Raised against unique peptide epitopes from the corresponding human IGFBPs.
- ◆ Purified IgG fraction from rabbit antisera.

Rat tissue images obtained from ExtrAvidin-Cy3 staining of transverse 7 µm sections from a formalin fixed, paraffin embedded day 19 foetus (Antibody dilutions shown).

[Click here to view matching negative controls in rat tissues](#)

[Click here to view an ExtrAvidin-Cy3 staining protocol for using these antibodies](#)

Human tissue images obtained from horseradish peroxidase staining of transverse 5 µm sections from a formalin fixed, paraffin embedded human kidney (Antibody dilution shown).

[Click here to view a horseradish peroxidase staining protocol for these antibodies](#)

For information on any of these reagents, click on the product title.

IGFBP-1, antibody for immunohistochemistry	Code: PAAH1
IGFBP-2, antibody for immunohistochemistry	Code: PAAI1
IGFBP-3, antibody for immunohistochemistry	Code: PAAJ1
IGFBP-4, antibody for immunohistochemistry	Code: PAAJ1
IGFBP-4, antibody for immunohistochemistry	Code: PAAG1
IGFBP-5, antibody for immunohistochemistry	Code: PAAF1
IGFBP-6, antibody for immunohistochemistry	Code: PAAE1
IGFBP-rP1, antibody for immunohistochemistry	Code: PAAD1

All supplied as 20 µg lyophilised aliquots for US\$250

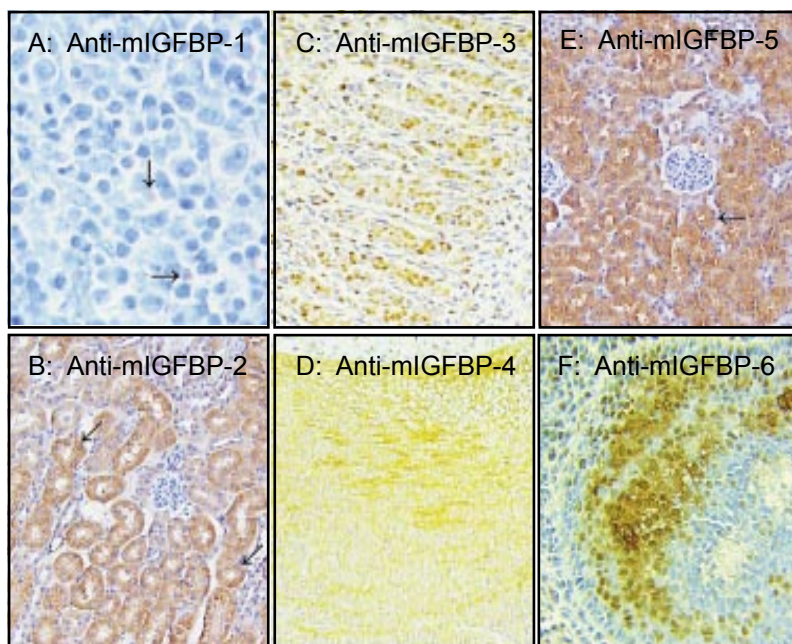
For Negative Controls:

Pre-immune normal rabbit IgG 100 µg Code: NRI01 US\$55

Multi-product Packs also available. [Click here for details.](#)

GroPep Anti-mouse/rat and anti-rat IGFBPs

Immunohistochemical localization of mouse IGFBPs



Anti-Mouse/Rat (Characterized for IHC)

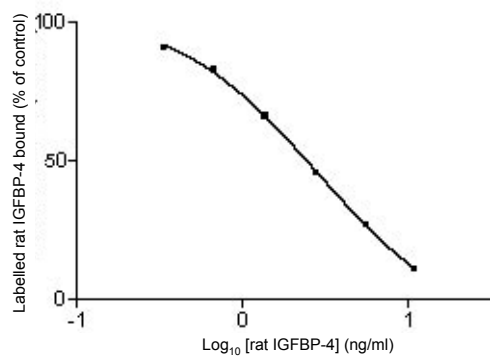
Anti-mouse/rat IGFBP-1	Code: PAJ1
Anti-mouse/rat IGFBP-2	Code: PAS1
Anti-mouse/rat IGFBP-3	Code: PAK1
Anti-mouse/rat IGFBP-4	Code: PAW1
Anti-mouse/rat IGFBP-5	Code: PAX1
Anti-mouse/rat IGFBP-6	Code: PAY1

All supplied as 100 µl lyophilised aliquots for US\$220

- A. Embryonic mouse liver and GroPep anti-mouse IGFBP-1 (1/250). Staining indicated
 B. Adult mouse kidney and GroPep anti-mouse IGFBP-2 (1/250). Staining indicated
 C. Embryonic mouse tongue and GroPep anti-mouse IGFBP-3 (1/250).
 D. Embryonic mouse hindbrain and GroPep anti-mouse IGFBP-4 (1/250).
 E. Adult mouse kidney and GroPep anti-mouse IGFBP-5 (1/250). Staining indicated
 F. Embryonic mouse nasal epithelium and GroPep anti-mouse IGFBP-6 (1/250).

Mouse IGFBP immunohistochemistry adapted from:
 van Kleffens, M. *et al.*, *Endocrinology*, **140**, 5944-5952, 1999.
 © The Endocrine Society, (Reproduced with permission)

Radioimmunoassay (RIA) of Rat IGFBP-4



Anti-Rat (Characterized for RIA)

Anti-rat IGFBP-4	Code: PAAP1
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Supplied as 100 µl lyophilised aliquot for US\$220

Radioimmunoassay of GroPep rat IGFBP-4 using GroPep's anti-rat IGFBP-4 antiserum.
 Can detect the very low concentrations of IGFBP-4 in rat serum (200 ng/ml) and can detect samples containing 1 ng rat IGFBP-4.

[Click here for protocol for iodination of rat IGFBP-4](#)
[Click here for rat IGFBP-4 RIA protocol](#)

References:
 Chelius, D., Baldwin, M. A. and Spencer, E. M. *J. Endocrinol.*, **168**, 283-296, 2001.
 Chelius, D. and Spencer, E. M. *Growth Hormone and IGF Research*, **11**, 49-57, 2001.



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To see *GroPep*'s range of IGFBP-related products, or to learn more about the IGF system, click on the links below:

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IGFBP Immunohistochemistry

***GroPep* IGFs and IGF Antibodies**

IGF-I Analogs from *GroPep* (Technical Bulletin No. 2)

IGF-II Analogs from *GroPep* (Technical Bulletin No. 3)

Biotinylated IGFs (Technical Bulletin No. 4)

IGF Precursors (Technical Bulletin No. 5)

The Type 1 IGF Receptor and the Insulin Receptor (Technical Bulletin No. 7)

IGFBP Mini-review (Technical Bulletin No. 8)

The Role of the IGF System in Cancer (Technical Bulletin No.9)

Can [IGF-I] and [IGFBP-3] be Diagnostic for Cancer? (Technical Bulletin No. 10)

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