

IMMUNOETHICAL ASSOCIATES

PABs and MABs for Immunodiagnostics



Established in 1994, ImmunoEthical Associates is a New Zealand based biotechnology company specializing in the production and supply of antibodies for commercial assay manufacture and research applications.

IEA maintains dedicated NZ facilities accommodating a hyperimmune population of sheep and goats, with associated on-site bioproduction and processing facilities.

The company operates in accordance with government approved and monitored animal ethics committees, with bio-sanitary, performance audits and verification oversight inputs from New Zealand Food Safety Authority, which allow the company to operate as a scientific materials producer, and as a government registered scientific materials exporter.

IEA offers its international clients a proven, comprehensive capability to produce and supply a range of high quality polyclonal antisera and related biological reagents. The company maintains an ex-stock inventory of high health, high specification antisera manufactured against a wide range of quality antigens, and will custom manufacture to client specifications.

IEA's method of manufacture, and New Zealand's zoonoses and TSE-free farm animals have been

proven to deliver a significant competitive advantage to international manufacturers of clinical chemistry products, while also ensuring a high level of tradability for diagnostic devices incorporating animal derived bioreagents produced under authority in New Zealand.

Once harvested, specific antibody lines are either exported directly to customers, or stored on reserve. Custom reagent production services, or ex stock antibody lines support in-vitro research programmes, or production of commercial immunoassays. Analytical and added value services are also performed, and include

- Immunogenic protein characterisations.
- Protein identifications and production of antigens.
- Protein purifications
- Protein conjugations
- Production of immunogens
- Evaluation of adjuvant performance
- Freeze drying.

IEA seeks to identify complimentary business partnering where possible, to contract continuous supply antibody production protocols, and establish synergistic linkages with immunodiagnostics and medical device researchers and proprietary assay manufacturers.

Polyclonal Antibodies available ex inventory

Antisera : Steroids & Hormones

Cortisol-3 BSA
Cortisol-21-BSA
Cortisol-CMO-BSA
Cortisol-3-CMO-BSA
Deoxycortisol-21-BSA
human FSH
human LH
human Chorionic Gonadotropin
human Prolactin
human TSH
Progesterone-11-BSA
Progesterone-11-HS-BSA
17 Hydroxyprogesterone-3-CMO-BSA
DHEA-3-HS-BS
Estril - 3
Estril-6-CMO-BSA
Estrodial-6-CMO-BSA
Estrone-6-CMO-BSA
Testosterone-3-BSA
Testosterone-4-CMP-BSA
Testosterone-3-CMO-BSA

Antisera : Drugs, Infectious & General

Amikacin-BSA
Caffiene
Candida albicans (2 strains)
Carbamazepine
Digitoxin
Digoxin
Gentamycin
Lidocaine
Napa
Phenobarbital
Phenytoin (Dilantin)
Primidone
Staphylococcus aureus (4 strains)
Strep. Pyogenes (2 strains)
Strept. sanguinis toxin
Theophylline
Tobramycin

Monoclonal Antibodies

Currently available **mouse monoclonal antibodies** are shown as listed, and can be used for ELISA or radioimmunoassay.

Cortisol

Corticosterone-binding globulin

Progesterone

Dehydroepiandrosterone sulphate

Androsterone/epiandrosterone sulphates

Estrone-3-glucuronide

Pregnanediol-3-glucuronide

17 OH progesterone

Sex hormone binding globulin

Osteocalcin 7-19

Osteocalcin 37-49

Retinol-binding globulin

human ataxin-2

Antibodies can be supplied either as culture supernatants or as purified immunoglobulin

ELISA kits or kit components are available for all **mAb analytes** listed above except osteocalcin and ataxin-2.

Monoclonal antibody specifications are as follows:

Cortisol monoclonal antibody

This antibody was raised against cortisol-21-acetate-3CMO-BSA and has been isotyped as IgG1κ. It is normally supplied as a culture supernatant which is suitable for the direct determination of cortisol in plasma. The recommended dilution of this product is 1:50. It has also been purified by affinity chromatography on Protein A Sepharose and can thus be supplied as purified immunoglobulin. Electrophoresis of this product shows a single band on agarose gels.

Cross-Reactivity

Steroid	cross-reactivity (%)
Cortisol	100
Progesterone	<0.1
17αOH progesterone	<0.1
11αOH progesterone	<0.1
11-deoxycortisol	19
Deoxycorticosterone	4.8
11-dehydrocorticosterone	1.3
11βOH progesterone	<0.1
Testosterone	<0.1
Estradio	<0.1
Pregnenolone	<0.1
Prednisone	3.0
Corticosterone	10.0
21-deoxycortisol	<0.1

21-deoxycortisone	<0.1
Dexamethasone	<0.1
Fludrocortisone	<0.1
Triamcinolone acetonide	<0.1
6α-methylprednisolone	12.9
Prednisolone	12.8

Progesterone monoclonal antibody

This antibody was raised in a mouse immunised with progesterone-3CMO-BSA and has been isotyped as IgG1κ. It is normally supplied as a culture supernatant which is suitable for the determination of progesterone in plasma following simple hexane extraction. The recommended dilution of this product is 1:100. Using this dilution the total turnaround time for an ELISA based assay is 2 hours. This includes extraction and all incubation steps. The assay protocol is available on request. It has also been purified by affinity chromatography on Protein A Sepharose and can thus be supplied as purified immunoglobulin. This product shows a single band on agarose gel electrophoresis.

Cross-Reactivity

Steroid	cross-reactivity (%)
Progesterone	100
Pregnanediol-3-glucuronide	<0.1
5β-pregnane-3α,20α-diol	<0.1
5α-pregnane-3,20-dione	100
5β-pregnane-3,20-dione	100
3β-hydroxy-5-pregnene-20-one	16.9
3β-hydroxy-5α-pregnan-20-one	8.9
11α-hydroxyprogesterone	1.8
11β-hydroxyprogesterone	0.4
5β-pregnane-3α,17α,20α-triol	<0.1
4-pregnen-20αol-3-one	<0.1
Cortisone	<0.1
21-deoxycortisol	<0.1
Cortisol	<0.1
11-dehydrocorticosterone	<0.1
Corticosterone	<0.1
21-deoxycortisone	<0.1
17αOH progesterone	0.8
11-deoxycortisol	<0.1
Deoxycorticosterone	0.1
Testosterone	<0.1
Estradiol	<0.1

Dehydroepiandrosterone-sulphate monoclonal antibody

This antibody was raised against DHEA-3-CMO-BSA and has been isotyped as IgG1κ. It is normally supplied as a culture supernatant which is suitable for the direct determination of DHEAS in plasma. It has also been purified by affinity chromatography on Protein A Sepharose and can thus be supplied as purified immunoglobulin. Electrophoresis of this antibody shows a single band on agarose gels.

Cross-Reactivity

Steroid	cross-reactivity (%)
DHEAS	100
DHEA	20
Androsterone sulphate	14
Androsterone	11
Androstenedione	0.8
Etiocholanolone	<0.01
Progesterone	0.1
Testosterone	<0.1
5 α androstane 3 α ,17 β diol	<0.1
5 β androstane 3 β ,11 β diol-17-one	<0.1
Pregnanediol-3-glucuronide	<0.001
Estradiol	<0.001
Cortisol	<0.001

Androsterone-sulphate monoclonal antibody

This antibody was raised against DHEA-7-0-CMO-BSA and has been isotyped as IgG1 κ . It is normally supplied as a culture supernatant which is suitable for the direct determination of androsterone and epiandrosterone sulphates in plasma after correction for DHEAS contributions. The antibody should be used in parallel assays with DHEAS determinations, using the DHEAS monoclonal antibody to provide an assessment of 5 α reductase activity. It has also been purified by affinity chromatography on Protein A Sepharose and can thus be supplied as purified immunoglobulin. Electrophoresis of this product shows a single band on agarose gels.

Cross-Reactivity

Steroid	cross-reactivity (%)
Androsterone sulphate	361
Epiandrosterone sulphate	361
Androsterone	180
DHEAS	100
DHEA	24
Etiocholanolone	24
Androstenedione	24
Progesterone	0.1
Testosterone	<0.1
5 α androstane 3 α ,17 β diol	<0.1
5 β androstane 3 β ,11 β diol-17-one	<0.1
Pregnanediol-3-glucuronide	<0.001
Estradiol	<0.001
Cortisol	<0.001

Estrone-3-glucuronide monoclonal antibody

This antibody was raised from a mouse immunised with estrone-3-glucuronide-3CMO-BSA and has been isotyped as IgG2a κ . It is normally supplied as a culture supernatant which is suitable for the direct determination of estrone-3-glucuronide in urine. The recommended dilution of this product is 1:150. It has also been purified by affinity chromatography on Protein A Sepharose and can thus be supplied as purified immunoglobulin. This product shows a single band on agarose gel electrophoresis.

Cross-Reactivity

Steroid	cross-reactivity (%)
Estrone-3-glucuronide	100
Estradiol-3-glucuronide	0.5
Estriol-3-glucuronide	<0.1
Estrone-3-sulphate	<0.1
Estradiol-3-sulphate	<0.1
Estrone	0.3
17 β -estradiol	<0.1
Estriol	<0.1
Pregnanediol-3-glucuronide	<0.1
5-pregnene-3 α ,11 β ,17 α -triol-20-one	<0.1
4-pregnene-11 β ,17 α -diol-3,20-dione	<0.1
4-pregnene-20 α -ol-3-one	<0.1
5-pregnene-3 β -ol-20-one	<0.1
Progesterone	<0.1
Cortisol	<0.1
11-dehydrocorticosterone	<0.1
Corticosterone	<0.1
21-deoxycortisone	<0.1
17 α OH progesterone	<0.1
11-deoxycortisol	<0.1
Testosterone	<0.1
Cortisone	<0.1
Androstenedione	<0.1
Androsterone	<0.1

Pregnanediol-3-glucuronide monoclonal antibody

This antibody was raised a mouse immunised with pregnanediol-3-glucuronide-3CMO- BSA and has been isotyped as IgG2b κ . It is normally supplied as a culture supernatant which is suitable for the direct determination of pregnanediol-3-glucuronide in urine. The recommended dilution of this product is 1:200. This antibody can be used in conjunction with the estrone-3-glucuronide monoclonal antibody for urine profiling to assess ovulatory function. It has also been purified by affinity chromatography on Protein A Sepharose and can thus be supplied as purified immunoglobulin. This product shows a single band on agarose gel electrophoresis.

Cross-Reactivity

Steroid	cross-reactivity (%)
Pregnanediol-3-glucuronide	100
5 β -pregnane-3 α ,20 α -diol	19.3
5 β -pregnane-3 α ,20 β -diol	<0.1
20 α -hydroxy-4-pregnene-3-one	13.7
5 β -pregnane-3 α ,17 α ,20 α -triol	2.1
5 α -pregnane-3,20-dione	<0.1
3 α ,11 β ,17 α -trihydroxy-5 β -pregnan-20-one	<0.1
3 β -hydroxy-5-pregnene-20-one	<0.1
3 β -hydroxy-5 β -pregnan-20-one	<0.1
Progesterone	< 0.1
Cortisol	<0.1

Cross-Reactivity - Pregnanediol-3-glucuronide - cont.

11-dehydrocorticosterone	<0.1
Corticosterone	<0.1
21-deoxycortisone	<0.1
17 α OH progesterone	<0.1
11-deoxycortisol	<0.1
Deoxycorticosterone	<0.1
Testosterone	<0.1
Estradiol	<0.1
Estrone	<0.1
Estriol	<0.1
Estrone-3-glucuronide	<0.1

Sex Hormone Binding Globulin monoclonal antibodies

Four monoclonal antibodies are available against human sex hormone binding globulin. These antibodies can be used in combinations for the determination of sex hormone binding globulin in plasma. In addition they can be used in conjunction with a polyclonal antibody for the determination of sex hormone binding globulin in plasma. Two of the antibodies are suitable for Western blotting applications.

Osteocalcin monoclonal antibodies

Several antibodies are available to human osteocalcin raised against amino acids 7-19 and amino acids 37-49.

Human ataxin-2 monoclonal antibody

A monoclonal antibody is also available which reacts with human ataxin-2. This is an IgM antibody and is suitable for immunohistochemical applications.

Corticosterone-binding globulin monoclonal antibody

One clone is available which, in combination with a polyclonal antibody, is used for the determination of corticosteroid-binding globulin in plasma and this monoclonal is also suitable for Western blotting.

Retinol-binding globulin monoclonal antibodies

Three monoclonal antibodies are available for the determination of retinol-binding globulin in plasma or urine.

ELISA Kits

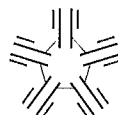
Elisa kits are available for ovulation profiling measuring estrone-3-glucuronide and pregnanediol-3-glucuronide in early morning urine samples. Elisa kits can also be assembled for DHEAS and androsterone/epiandrosterone sulfates.

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