Kirklees Bio offers one of the largest ranges of biological products in Europe. Privately owned, Kirklees Bio is a UK company retaining the traditional values of quality product and absolute customer care, providing a fast, friendly and efficient service with a focus on traceability.

This brochure outlines the most common types of human and animal material that we are able to offer. Please contact us should your requirement not be listed. Normal human material is collected in the USA from FDA registered facilities and EU origin material may also be available.

Kirklees Bio retains a comprehensive inventory of disease state human donor material and this may be supplied on request. All samples are collected under IRB approval with appropriate donor consents in place.

Animal material is collected in both the US and UK and harvested from animals in facilities under veterinary supervision from an extensive range of animal species and strains. Material is also available from a large range of agricultural species.

For further information please contact:
Email: info@kirkleesbio.com
Call: +44 (0)1484 365369
Website: www.kirkleesbio.com

Animal Material
Kirklees Bio animal-derived products are sourced from laboratory animals bred under controlled conditions. Collections are made from animals that have been fasted and which are drug naïve. This results in a high quality product with minimal batch variation and allows for complete traceability.

**Serum:** All serum, unless requested otherwise, is collected ‘off clot’ without additives or preservatives.

**Complement Preserved Serum:** Complement preserved serum and lyophilised complement products are also available.

**Plasma and Whole Blood:** This material is prepared with the anticoagulant of choice. Standard anticoagulants are:
- ACD
- CTAD
- Sodium Citrate
- Sodium Heparin
- Potassium EDTA (K2 or K3)
- Sodium Oxalate

**PBMCs:** PBMC extractions are available from a wide variety of animal species, prepared to individual protocols. These can be supplied fresh, as Buffy Coats or as frozen cell separations.

**Processes and Presentations:**
- Medium and Heavy Charcoal stripping
- Ultra filtration to specified molecular weight cut offs
- Custom aliquoting

**Material Specification Options:**
- Individual donor
- Pooled donors
- Single gender
- Pooled gender
- Specific strains
- Non filtered material
- Sterile filtered to 0.2 micron
- or 0.45 micron
- Fibrinogen free
- Ultra centrifugation

**Tissues**
These are collected to customer specification and may be supplied frozen or fresh.

**Microsomes and S9 Fractions**
Kirklees Bio offers a large range of pooled microsomes and S9 fractions from liver and other tissues from a variety of animal species and breeds. Animal liver cytosol is also available. Please contact us for further information.

**Homogenisation**
Kirklees Bio are pleased to offer homogenised fresh tissues from a variety of animal sources. Our UK facility is now able to offer uniform dilutions of tissue suspensions that have been homogenised using Wheaton Potter-Elvehjem Tissue Grinders.

Our standard homogenisation buffer is sterile saline containing gentamicin [0.8 µg/ml] and chloramphenicol [0.05mg/ml] however we are happy to prepare material to specific protocols. Protocols may be tailored to meet specific requirements for assay targets in various ways, including:
- Addition of Protease inhibitors for protein activity and characterisation assays
- Addition of surfacants/detergents for denatured protein use in immunoassays
- Addition of Chaotropes for RNA
- Addition of EDTA to prevent DNAase activity

Further testing available on request
<table>
<thead>
<tr>
<th>Product Code</th>
<th>Animal Species</th>
<th>Serum</th>
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</tbody>
</table>

*limited availability

Email: sales@kirkleesbio.com
In addition to a large range of blood products Kirklees Bio can also supply tissues and bodily fluids. Presentations for whole tissues or sections include frozen, homogenised and formalin or paraffin fixed. Tissues may also be prepared to specific protocols and whole animal necroscopy is also offered.

Baboon, Beagle, Bovine, Cat, Chicken, Cynomolgus Monkey, Dog (mongrel), Donkey, Ferret, Gerbil, Goat, Guinea Pig, Hamster, Horse, Marmoset, Mini-Pig, Mouse, Pig, Rabbit, Rat, Rhesus Monkey, Sheep

Most of these items are prepared to order so please contact us to enquire as to the time frame for delivery. Please contact our Customer Services Department to enquire about the availability of products that are not listed.

**Animal Tissues and Fluids**

<table>
<thead>
<tr>
<th>Tissues</th>
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<tr>
<td>Adrenal, Aorta, Bladder</td>
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<td>Brain, Colon, Duodenum</td>
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<td>Femur, Foetus, Heart,</td>
<td>Lung, Kidney, Nasal Tissue</td>
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<td>Ovary, Pancreas, Pituitary</td>
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<td></td>
<td>Prostate, Sciatic Nerve</td>
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<td>Skeletal Muscle, Skin</td>
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<td>Small Intestine, Spinal Cord</td>
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<td>Thymus, Thymus, Tonsil</td>
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<tr>
<td></td>
<td>Thyroid, Tail, Uterus</td>
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</table>

**Commonly available strains**

- Various
- Various
- Domestic Shorthair
- Various
- Short Tail
- Mongrel
- Various
- American
- Mongolian
- Various
- Hartley
- Golden Syrian
- Various
- Please enquire
- Gottingen, Yucatan, Sinclair, Hanford
- CD-1, Swiss Webster, C57BL/6, BALB/c, NMR1, B6C3F1, ICR, FVB, DBA, Genetically Modified strains
- Yorkshire
- New Zealand White, Dutch Belted, Half Lop, Full Lop, Flemish Giant
- Sprague Dawley, Hanover Wistar, Wistar, Long Evans, Fischer 344, Norway Brown, Zucker, Cotton, Lewis, Lister Hooded
- Dorper/Katahdin
- White Broad Breaster

Email: sales@kirkleesbio.com
Human Material

Normal human material is collected from stringently screened donors at FDA registered donor centres. The donors must test negative for RPR, HIV 1, HIV 2, Hepatitis B Surface Antigen, HCV and HIV 1-Ag using approved FDA methodology. The donors must have normal ALT levels. Qualifying donors are selected after receiving a complete physical examination and passing all the required viral marker tests using approved FDA methodology.

Serum: All serum, unless requested otherwise, is collected ‘off clot’ without additives or preservatives.

Complement Preserved serum: Complement preserved serum and lyophilised complement products are also available.

Plasma and Whole Blood: This material is prepared with the anticoagulant of choice. Standard anticoagulants are:
- ACD
- CTAD
- Sodium Citrate
- Sodium Heparin
- Sodium EDTA
- Lithium Heparin
- Potassium EDTA (K2 or K3)
- Potassium Oxalate/Sodium Fluoride

Processes and Presentations:
- Medium and Heavy Charcoal stripping
- Ultra filtration to specified molecular weight cut offs
- Custom aliquoting
- Non filtered material and Sterile filtered to 0.2 micron or 0.45 micron
- Fibrinogen free
- Ultra centrifugation

Material Specification Options:
- Individual donors
- Pooled donors
- Single gender
- Pooled gender
- Specific demographic groups
- Age, race and gender specifications
- Specific dietary requirements

Cell Isolations

Kirklees Bio offers customised cell isolations from both normal and disease state donors.
- Flexible customised service
- Normal donors
- Disease state donors from clinical sites including the following disease states: Leukaemias, Lymphomas, Multiple Myeloma, Solid Tumours, Metastatic Tumours, Pulmonary Disease, Diabetes, Rheumatological Disease, Auto-Immune Disease, Cardiovascular Disease, Neurological Disease, Viral and Bacterial infections, Dermatological, Gastroenterological and Ocular diseases.
- PBMC extractions (See back page)
- Cell isolations of a large number of cell types including: T Cells, B Cells, Monocytes, NK Cells, Basophils, Eosinophils, Neutrophils, Granulocytes, Dendritic cells, Lymphoid cells, Myeloid cells

Email:sales@kirkleesbio.com

Rare Human Plasma

Rare human plasma is collected from stringently screened donors at FDA registered donor centres. The donors must have normal ALT levels. Qualifying donors are selected after receiving a complete physical examination and passing all the required viral marker tests using approved FDA methodology. These plasmas may be provided either as a whole unit or in small volumes (minimum 10ml).

Product Description
- Hepatitis
- Hepatitis A Antibody IgG, IgM
- Hepatitis B Core Antibody IgG, IgM
- Hepatitis B Surface Antigen
- Anti-HBe
- Anti-HBs
- HBeAg

Factor Deficient
- Factor VIII Deficient Plasma
- Factor IX Deficient Plasma
- Factor XI Deficient Plasma
- Factor XII Deficient Plasma

Torch Profile
- Cytomegalovirus Antibody IgG, IgM (CMV)
- Herpes I Antibody IgG, IgM
- Herpes II Antibody IgG, IgM
- Rubella Antibody IgG
- Rubella Antibody IgM
- Toxoplasmosis IgM

Human Immunodeficiency Virus (HIV)
- Anti-HIV 1
- Anti-HIV 2
- Anti-HTLV 1
- Sero Converter Panels for HIV 1

Other Plasma
- Anti-Streptolysin-O Antibody (ASO)
- C-Reactive Protein Antigen (CRP)
- Epstein-Barr Antibody
- Mononucleosis Antibody
- Rheumatoid Arthritis Antibody (RA)
- RPR Positive Antibody
Kirklees Bio can provide material, including human tissues, from donors with specific disease states or conditions. A specimen bank is maintained with the more frequently collected samples allowing for quick delivery. More esoteric material is collected to order. Shipments of human tissues are made direct from the collection centres in the USA.

Samples are collected by the following methods:
- Pre-existing, remnant diagnostic specimens that are de-linked from their original source
- Prospective samples collected under approved IRB protocols

Samples may be collected as frozen tissues, organs, sections; as serum, plasma, whole blood or other bodily fluids such as CSF, synovial fluid, etc.

When collecting material prospectively, multiple time-point collections or matched sets of multiple tubes may be available. Disease state panels from multiple donors in custom aliquot sizes are available and are shipped in cryo-boxes.

A detailed certificate of analysis accompanies each sample supplying the age and gender of each donor. Further additional clinical information, including medication, may be requested at the time of order.

Our extensive network of medical offices, reference laboratories and collection facilities allow us to meet all of your requirements.

## Clinical Samples and Disease State Material

**Acute Myeloid Leukaemia**

**Age Related Macular Degeneration (AMD)**

**ANA**

**Anti-DNA Positive**

**Allergy Specific or Groups**

**Alzheimer's Disease**

**Ankylosing Spondylitis**

**Asthma**

**Cancer (all types)**

**Cardiac Disease**

**Chagas**

**Chlamydia**

**Crohn's Disease**

When collecting material prospectively, multiple time-point collections or matched sets of multiple tubes may be available.

Disease state panels from multiple donors in custom aliquot sizes are available and are shipped in cryo-boxes.

A detailed certificate of analysis accompanies each sample supplying the age and gender of each donor. Further additional clinical information, including medication, may be requested at the time of order.

**Our extensive network of medical offices, reference laboratories and collection facilities allow us to meet all of your requirements.**

### PBMC Extraction

Peripheral Blood Mononuclear Cells (PBMCs) are available from both human and animal collections. PBMCs are isolated from whole blood samples using different density gradient centrifugation procedures. Anticoagulated whole blood is layered over the separating medium. After centrifugation, the following layers are visually observed, running from top to bottom: plasma, mononuclear cells and platelets, separating medium, granulocytes and erythrocytes.

PBMCs are available in Sodium Citrate or Sodium Heparin. For a quotation and further details please contact Customer Services on 01484 365369.

### Shipping

Material not held in stock will be collected and prepared to your specific requirements quickly and efficiently. The time frame of delivery can vary with availability and the complexity of the protocol. Seralab uses high quality packaging and market leading logistics partners to ensure your products reach you on time and in prime condition. We also have a wealth of expertise in managing all types of essential customs and health documentation worldwide.

Our Customer Services can provide professional advice on both your products and how we get them to you safely and on time.