



zenbio

Advanced Cell-based Systems & Services

Dear Researcher,

Welcome to ZenBio!
ZenBio is committed to being your research partner. We have been in business now for over 17 years and wish to thank all of you that have supported ZenBio along the way. We take our customers seriously and wish to provide the best quality product and services at the most reasonable prices. We have maintained a rigid and controlled overhead structure allowing us to pass along our cost savings to you.

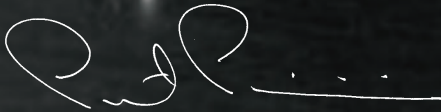
ZenBio continues to focus on helping our clients build greater capacity for pre-clinical screening, drug discovery research, tissue procurement, consulting and custom development. Over the past 2 years we have implemented a number of new programs plus added multiple human and non-human cell based products and related reagents. We now offer a vast selection of human blood products and at volumes most others cannot match. We can source both normal and disease state material.

In addition to our world-class molecular biology and research products and services, ZenBio has successfully launched both our Zen Skin service catering to cosmetic and personal care product companies and our ZenComplete program offering a complete package of contract services tailored to your research needs.

Since its inception, in 1995, ZenBio has been a recognized leader in delivering sustainable and ever-expanding research capabilities, reflected by our legacy of scientific success and collaboration, coupled with world-class technical support and client-focused attention. If you have a need for a particular assay, service or product development please contacts us. If we do not already have the assay you need, we are always available to provide custom development work or published protocol customization.

We want to hear your thoughts and understand your needs. Contact us today to get started with a tailored mix of products and services designed specifically with your research in mind. Our aim is to help you achieve your goals through quality products, premium customer service, and real value, every time. When you call to discuss your needs, you'll reach a real person, not a phone tree. We take our relationship with you seriously. And we commit our time and attention to giving your research the attention it deserves. Call us today.

Sincerely,

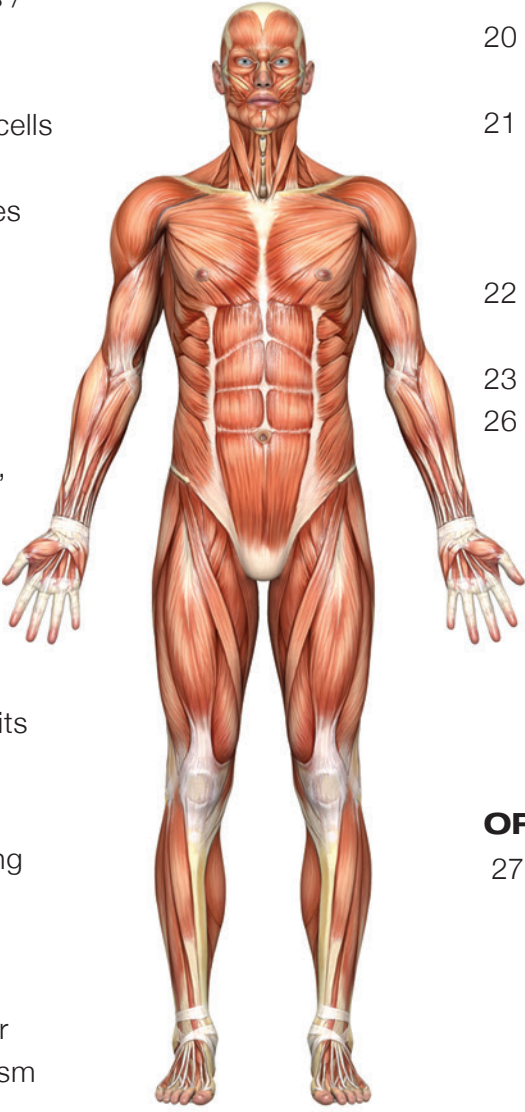


Peter Pieraccini
President, ZenBio, Inc.

T A B L E O F C O N T E N T S

PRODUCTS

- 4 preadipocytes & adipocytes
- 5 human skeletal myoblasts / myocytes
- 6 hepatocytes
- 7 adult stem & mesothelial cells
- 8 dermal fibroblasts & keratinocytes, melanocytes
- 9 additional cell types
- 10 serum, media, & reagents
- 11 human blood
- 12 adiposight™ lipolysis assay kits
- 13 adipogenesis, triglyceride, FAO assay kits
- 14 adiponectin elisa kit, cell staining kit, serum / plasma fatty acid & glycerol detection kit
- 15 cosmeceutical research kits



- 19 serum / plasma fatty acid & glycerol detection assay service
- 20 3T3-L1 murine adipocyte assay service
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- 22 cosmetic / personal care screening
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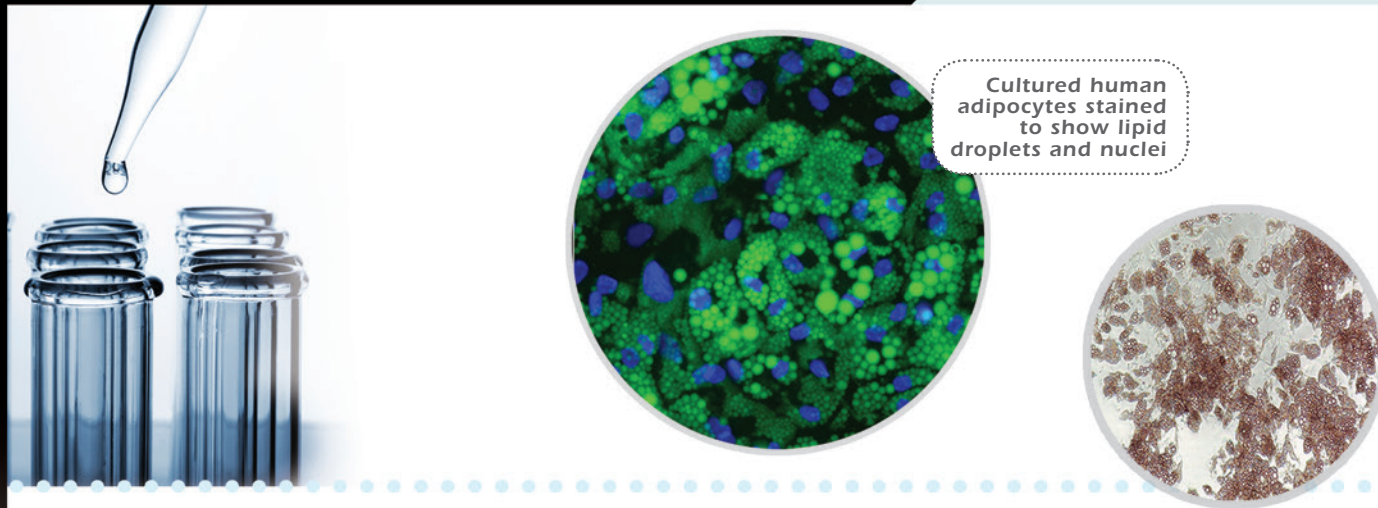
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3200 Chapel Hill-Nelson Blvd., Suite 100,
Research Triangle Park, NC 27709
Toll Free 1-866-ADIPOSE (1-866-234-7673)



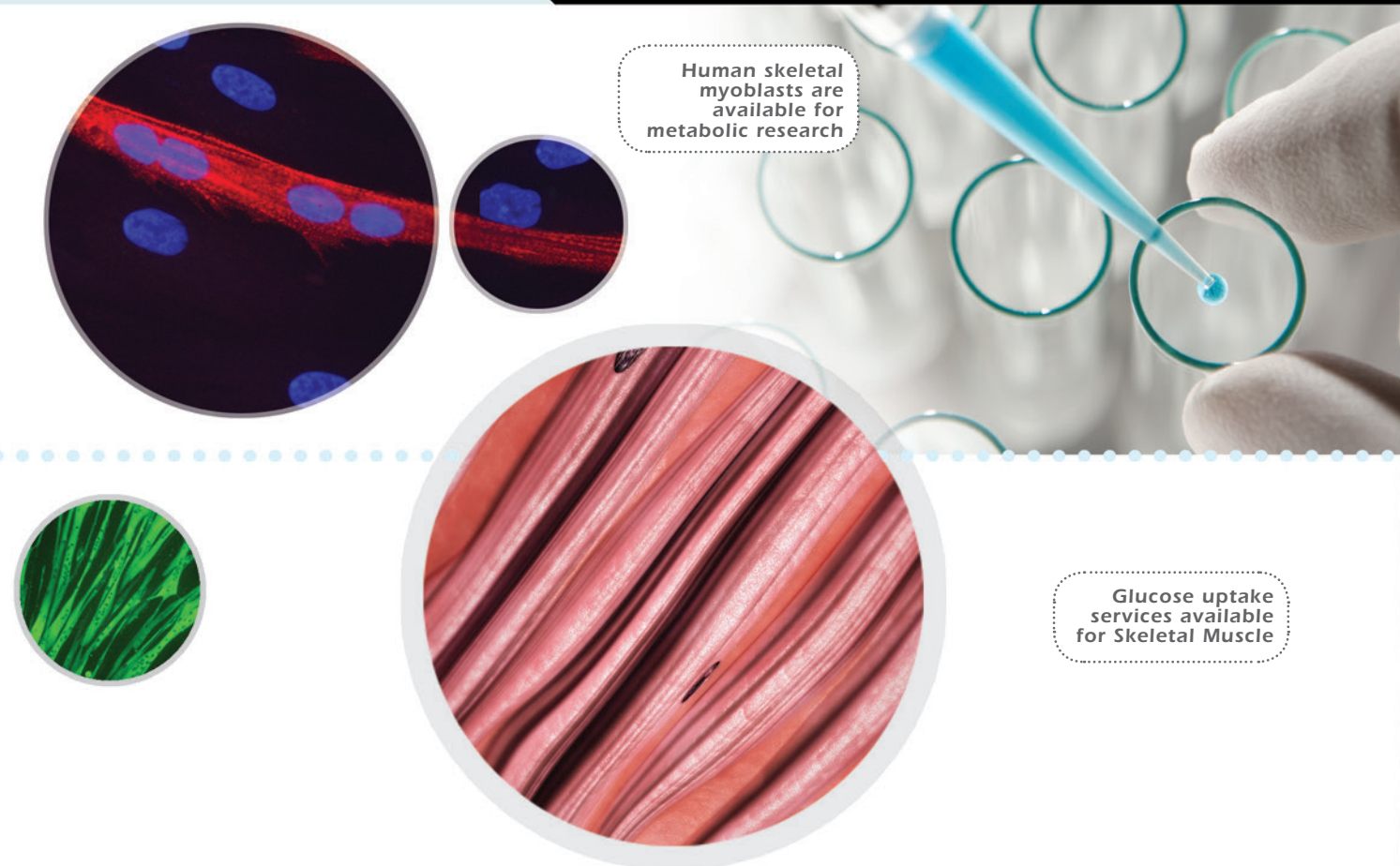
subcutaneous and visceral ZenBio provides the highest quality primary human cultured preadipocytes and adipocytes. Our cells have many applications in basic research, drug screening, and pharmaceutical development.

We isolate cells from a wide variety of living donors, with good representation from all levels of adiposity and age, from both male and female donors. Pooled lots of cells are available from donors of both sexes, which provides sufficient volumes of cells for screening while reducing donor-to-donor variability issues. ZenBio only ships cells that meet our stringent quality control parameters.

Preadipocytes are available cryopreserved or in culture. Adipocytes are differentiated in vitro from preadipocytes using our patent protected differentiation methods. Cells are available in a variety of plate formats. All cells are performance tested for lipid accumulation, lipolysis and glucose uptake.

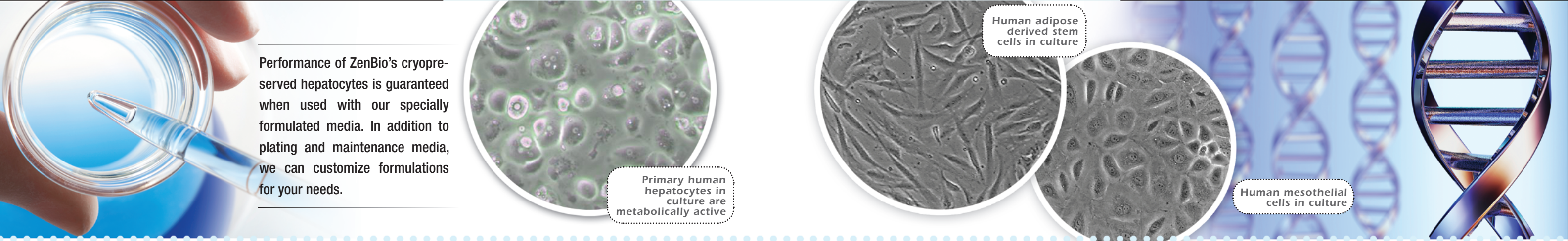
Specially formulated media are available for use with our subcutaneous/visceral preadipocytes and adipocytes.

3T3-L1 Cells available for comparative studies. (See page 20 for more details.)



skeletal muscle is an important site of insulin-stimulated glucose disposal and often the site of insulin resistance in obesity. Human primary cultured skeletal muscle cells can directly reflect a patient's metabolic phenotype, because many of the signaling pathways are maintained intact. ZenBio offers human primary skeletal muscle cells from a variety of donors, including obese donors with Type 2 diabetes.

Skeletal muscle satellite cells are isolated from the rectus abdominus (as well as other sites) and propagated in culture as myoblasts. Each lot is analyzed for myotube formation and the expression of myocyte-specific markers. The myoblasts are cryopreserved and guaranteed for use with ZenBio support media.



Performance of ZenBio’s cryopreserved hepatocytes is guaranteed when used with our specially formulated media. In addition to plating and maintenance media, we can customize formulations for your needs.

Primary human hepatocytes in culture are metabolically active

Human adipose derived stem cells in culture

Human mesothelial cells in culture

Cryopreserved mature hepatocytes are available as either platable or non-platable cells. These cells are terminally differentiated, non-proliferating cells isolated from whole, non-transplantable human liver tissue. This offers a distinct advantage over many other hepatocyte providers in that our cells are non-tumorigenic and non-cancerous. Cells are available from a wide variety of donors, both male and female. Additionally, **RNA** derived from whole tissue and isolated hepatocytes are available. All lots of cells are available with an extensive amount of deidentified patient medical information.

non-parenchymal cells available: Kupffer, Stellates, Progenitors, Sinusoidal Endothelial, and Intra-hepatic Biliary Epithelial cells.

- CYP PROFILING
- PHASE I/II METABOLISM
- STEATOSIS INDUCTION
- GLUCOSE SECRETION
- GLYCOGEN SYNTHESIS

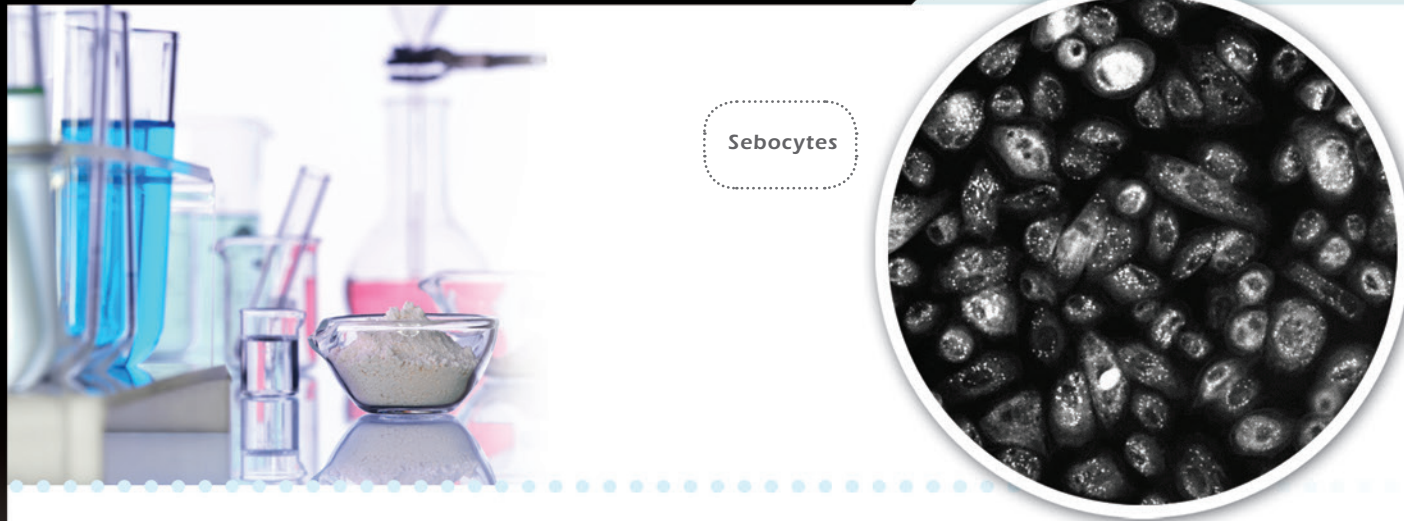
adult adipose derived stem (ASC) cells are available from a wide variety of patient populations. By using ZenBio’s media and protocols, these pluripotent, mesenchymal cells are capable of differentiating into adipocytes, osteoblasts, and chondrocytes (and others). All ASC cells pass a rigorous quality control process to ensure their ability to differentiate into multiple lineages. ASC cells have very similar phenotypic and functional characteristics to bone marrow-derived mesenchymal stem cells.

- Cells are available cryopreserved (1 million cells/vial).

ZenBio unconditionally guarantees the performance of these cells when using our protocols and specially formulated media. Media systems are available for the maintenance and differentiation of our adult stem cells.

mesothelial cells Mesothelial cells play pivotal roles in ovarian cancer metastasis, peritoneal dialysis, surgical adhesions, inflammatory response, and metabolic disease. These specialized epithelial cells form a single cell layer with a critical barrier function and provide a frictionless surface for organs and tissue to move without damage. We isolate peritoneal mesothelial cells from omental tissue biopsies with minimal propagation.

- Mesothelial cells are available either cryopreserved or in culture. Ready to use medium is also available.



Sebocytes

dermal fibroblasts Our dermal fibroblasts are isolated from both adult and neonatal human skin samples and are available as cryopreserved cells or propagating cells in a variety of plate formats. We offer donor-matched dermal fibroblasts, preadipocytes, keratinocytes, and cultured adipocytes to provide investigators with donor-controlled cells for their research.

keratinocytes ZenBio's epidermal keratinocytes are isolated from both adult and neonatal human skin samples and are provided at the earliest passage without the use of a murine feeder layer. Our keratinocytes are available with fibroblasts and preadipocytes from donors of varying gender, age, BMI, and diabetes status.

sebocytes ZenBio adult sebocytes are isolated from sebaceous glands microdissected from the face skin of healthy, consented donors following elective surgery. The human primary sebocytes exhibit epithelial cell morphology and over 80% of the cells express cytokeratin 7, a selective marker for the undifferentiated sebocyte lineage. The proliferating cells express very little, if any, EMA/Muc-1, a marker of sebocyte differentiation. However, mature differentiated cells stain intensely for EMA/Muc-1. All of our sebocyte lots are screened for androgen and PPAR receptor expression and the production of lipids.

renal epithelial cells Renal proximal convoluted epithelial cells are isolated from kidney tissue and can polarize in vitro when cultured on membrane inserts. The cells are functionally validated and express appropriate transporters. Additional renal cells will be made available upon request.

melanocytes Adult and neonatal primary melanocytes are isolated from the epidermis and when cultured in vitro they produce melanin.

apocrine / eccrine sweat glands Primary epithelial cells are isolated from microdissected apocrine and eccrine sweat glands. Eccrine epithelial cells are derived from both the coil and ductal regions and verified for acetyl choline receptor and appropriate transporter expression.

fallopian tube epithelial cells Secretory and ciliated epithelial cells are isolated from both the ductal and fimbrial regions of the human fallopian tube. These cells can polarize and form tight junctions when placed on filter inserts in culture.

mammary epithelial cells Basal and luminal mammary epithelial cells are isolated from normal and cancerous ductal tissue. In some cases, donor matched normal and cancer-derived cells are available.

microvascular endothelial cells Endothelial cells are isolated from adipose tissue microvasculature and express CD31, CD146, Von Willebrand factor and take up dil-ac-I α l. We provide these cells at low passage and cryopreserved.





All ZenBio media are performance tested for sterility and support of cell viability. These media formulations are the result of years of experience in providing nutrients for optimal cell growth in research and manufacturing.

- FETAL BOVINE SERUM
- DMEM/F12
- DPBS
- RPMI
- KREBS RINGER BUFFER
- TRYPSIN-EDTA
- ACCUTASE
- DISPASE
- ANTIBIOTICS

ALL MEDIA ARE PROVIDED READY TO USE. CLASSICAL AND CUSTOM FORMULATIONS AVAILABLE UPON REQUEST.

ZenBio is your source for Human Blood Products. We can supply a various components to meet your research needs, including custom collections and diverse donor parameters. All of our blood products are collected according to FDA guidelines and are fully pathogen tested.

- Human Serum
- Plasma
- Whole Blood, (adult, cord derived, mobilized)
- Red Blood Cells
- Leukocytes (Buffy Coat)
- Platelet Rich Plasma
- Platelet Concentrates
- Platelet Membranes
- PBMCs, MNC
- B Cells, CD34+, CD14+, T Cells, Naïve T Cells, Eosinophils, Neutrophils
- Custom Subfractions

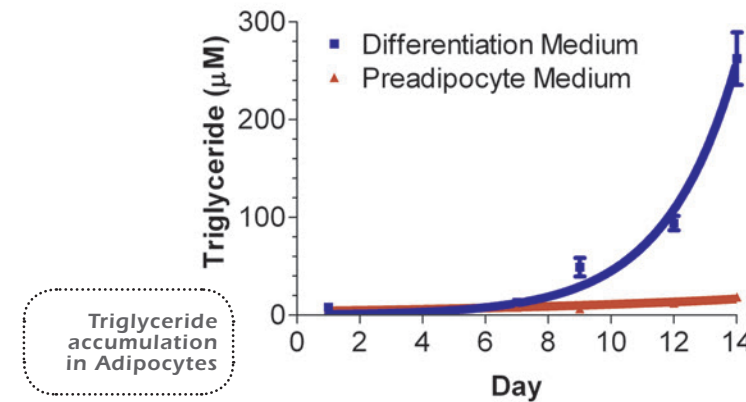


We collect our blood products in a variety of different anticoagulants including ACD, CPD, CPDA-1, Heparin and EDTA. We can collect custom products using your specified proprietary additive. If a product in which you are interested is not listed, please contact us!



ZenBio has been involved in obesity, diabetes, and metabolic disease research for more than 17 years. Our company was established to meet the urgent need of researchers for primary human adipocytes, to investigate the underlying mechanisms of obesity-related disorders. Through the development of our cell systems and characterization of their activities, we have generated a suite of assays that we offer as kits to the research community.

adiposight™ lipolysis assay kits The hydrolysis of triglycerides to glycerol and free fatty acids is an important part of balancing the body's energy needs. ZenBio has created several kits to quantify **lipolysis** by measuring glycerol and free fatty acid release from cultured adipocytes. The kits are available with or without a 96-well plate of adipocytes or vial of preadipocytes depending on the requirements of the researcher. Our kit, measuring glycerol release, is offered as a colorimetric or fluorescent assay. The fatty acid release assay is available as a colorimetric assay..



adipogenesis assay kits Preadipocytes can differentiate to mature adipocytes in culture in the presence of a cocktail of factors. We offer kits to identify glucocorticoid analogues or PPAR gamma agonists, two initiators of preadipocytes differentiation. The kits are available with or without a vial of cryopreserved preadipocytes, depending on the requirements of the researcher. These assay kits measure triglyceride accumulation during the differentiation process.

triglyceride assay kits These kits contain all of the reagents necessary to quantify triglyceride accumulated in cultured cells, including primary human and animal cells, and cell lines. We offer a single plate kit containing reagents for 1, 96-well plate and a 5 plate kit suitable for larger assays.

fatty acid oxidation kit & device Skeletal muscle fatty acid metabolism is dysregulated in obesity and type 2 diabetes. ZenBio's fatty acid oxidation kit provides the necessary tools to identify modulators of fatty acid metabolism in primary myoblast or cell-line derived myotubes. The kit comes with or without a 24-well plate of human primary skeletal muscle cells, positive and negative controls, 48-well capture plates and all reagents necessary to perform the assay. The end user must purchase ^{14}C -oleate separately from a licensed vendor and have appropriate radiation licensing to perform the assays.

ZenBio also has a device specifically designed for the 48-well capture plates to standardize the release and capture of ^{14}C -labeled CO_2 . This device can be reused and comes with the appropriate gasket to provide an air tight seal during CO_2 release.

adiponectin elisa kit Adipocytes express a variety of protein hormones that modulate glucose and lipid metabolism. Adiponectin is an adipokine whose secretion is regulated by insulin and whose circulating levels are decreased in obesity and Type 2 diabetes. Our human adiponectin ELISA kit is designed to measure the concentration of human adiponectin from human serum/plasma, human adipocytes, or conditioned media.

lipid staining kit Mature adipocytes store energy by synthesizing and accumulating lipid in the form of triglyceride. Cultured human adipocytes store triglyceride in small lipid droplets that eventually can merge into a single large droplet. Oil Red O is a fat-soluble dye that can stain neutral lipids, such as triglyceride, bright red. ZenBio's lipid staining kit provides reagents to stain mature adipocytes in a 96-well plate.

serum/plasma fatty acid & glycerol detection kit The level of non-esterified fatty acids (NEFA) and glycerol in serum or plasma is indicative of endogenous or induced adipocyte lipolysis. Fatty acids and glycerol are released by adipocytes in response to lipolytic hormones and enter the bloodstream for utilization by other tissues. ZenBio offers kits to analyze the levels of NEFA, glycerol, or both in human and animal serum or plasma. The serum/plasma fatty acid kits are available in either 1, 5, or 10 plate kits.

ez titer kit for cell proliferation / cytotoxicity ZenBio's EZ Titer reagent provides a rapid and sensitive method to measure cell viability, proliferation and cytotoxicity. It works equally as well with primary cells and cell lines. The nontoxic reagent (resazurin) readily enters live cells where it is converted to a fluorescent analog (resorufin), nonviable cells can't metabolize the reagent and therefore aren't measured. EZ Titer reagent is directly added to the cell medium in a homogeneous mix-and-read assay format that is scalable and easily coupled to other endpoint assays. EZ Titer provides a flexible readout giving you a choice between fluorescence or absorbance measurements.

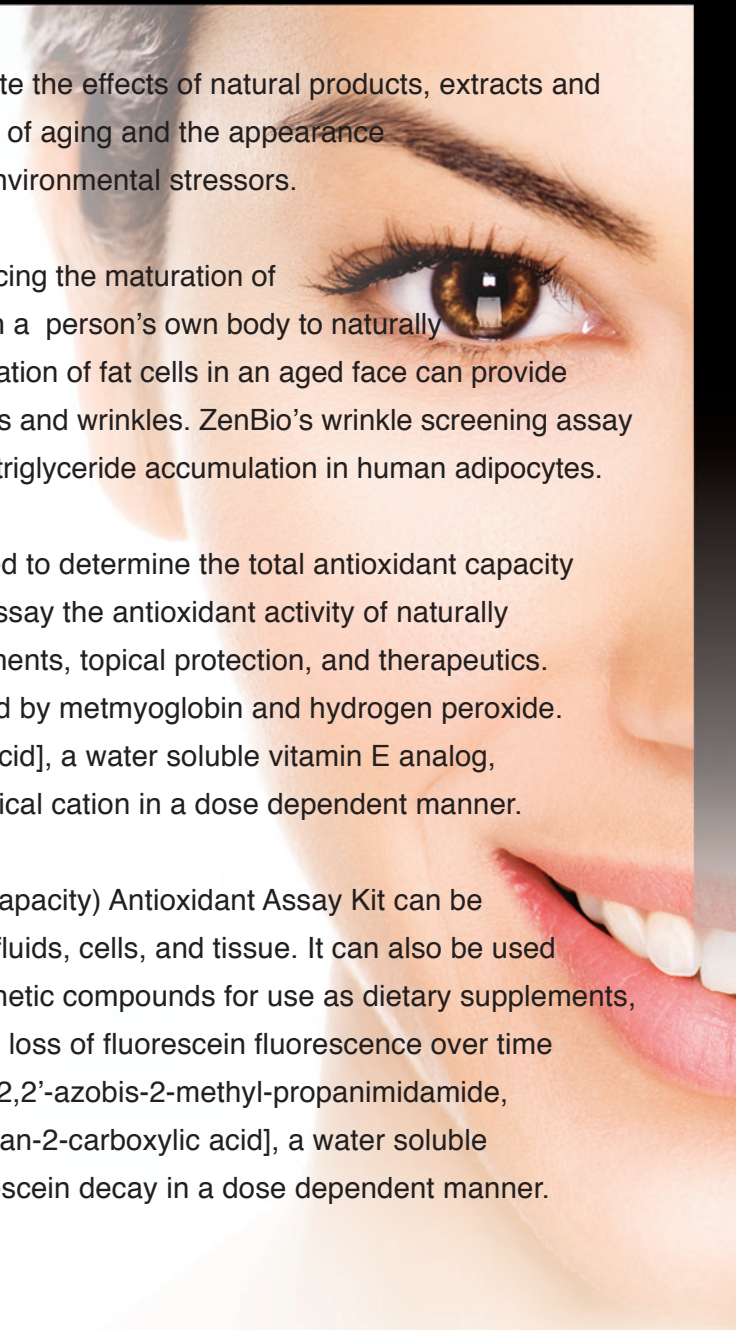


ZenBio has developed kits to investigate the effects of natural products, extracts and compounds used in reducing the signs of aging and the appearance of wrinkles, and protecting skin from environmental stressors.

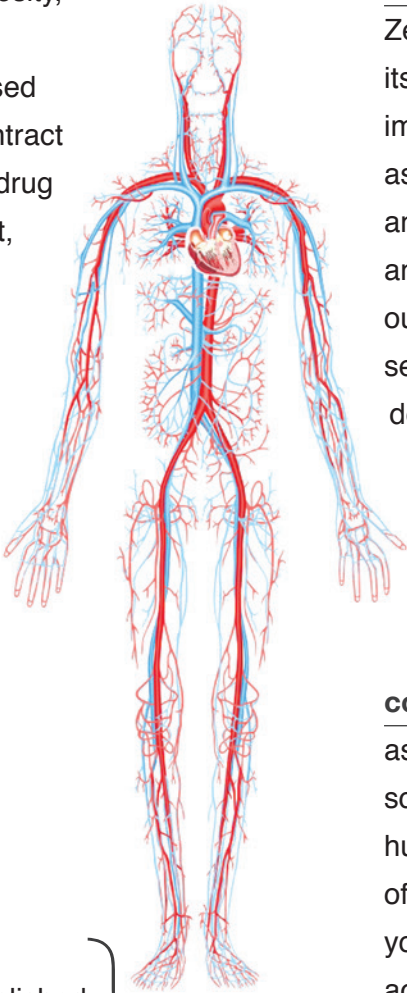
Products capable of triggering or enhancing the maturation of preadipocytes into fat cells will work with a person's own body to naturally fill in deficient areas of the skin. The creation of fat cells in an aged face can provide natural augmentation, filling out fine lines and wrinkles. ZenBio's wrinkle screening assay kit measures the effects of additives on triglyceride accumulation in human adipocytes.

abts kit The ZenBio ABTS Antioxidant Assay Kit can be used to determine the total antioxidant capacity of biological fluids, cells, and tissue. It can also be used to assay the antioxidant activity of naturally occurring or synthetic compounds for use as dietary supplements, topical protection, and therapeutics. The assay measures ABTS.+ radical cation formation induced by metmyoglobin and hydrogen peroxide. Trolox [6-Hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid], a water soluble vitamin E analog, serves as a positive control inhibiting the formation of the radical cation in a dose dependent manner.

orac kit The ZenBio ORAC (Oxygen Radical Absorbance Capacity) Antioxidant Assay Kit can be used to determine the total antioxidant capacity of biological fluids, cells, and tissue. It can also be used to assay the antioxidant activity of naturally occurring or synthetic compounds for use as dietary supplements, topical protection, and therapeutics. The assay measures the loss of fluorescein fluorescence over time due to peroxy-radical formation by the breakdown of AAPH (2,2'-azobis-2-methyl-propanimidamide, dihydrochloride). Trolox [6-Hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid], a water soluble vitamin E analog, serves as a positive control inhibiting fluorescein decay in a dose dependent manner.



contract assay services ZenBio is a leader in the research of adipocyte biology, obesity, diabetes, and metabolic diseases. The systems we have developed are used by researchers worldwide. ZenBio's contract assay services help organizations with drug screening, pharmaceutical development, and natural products testing. For more than ten years, ZenBio has performed contract assays for biotechnology and pharmaceutical firms, research institutes, and cosmetic manufacturers. Our services can be fully customized and we guarantee quality results. We work according to the highest professional standards, are GLP Certified, and adhere to a strict confidentiality policy.



Custom Assay Development and Published Protocol Customization Available

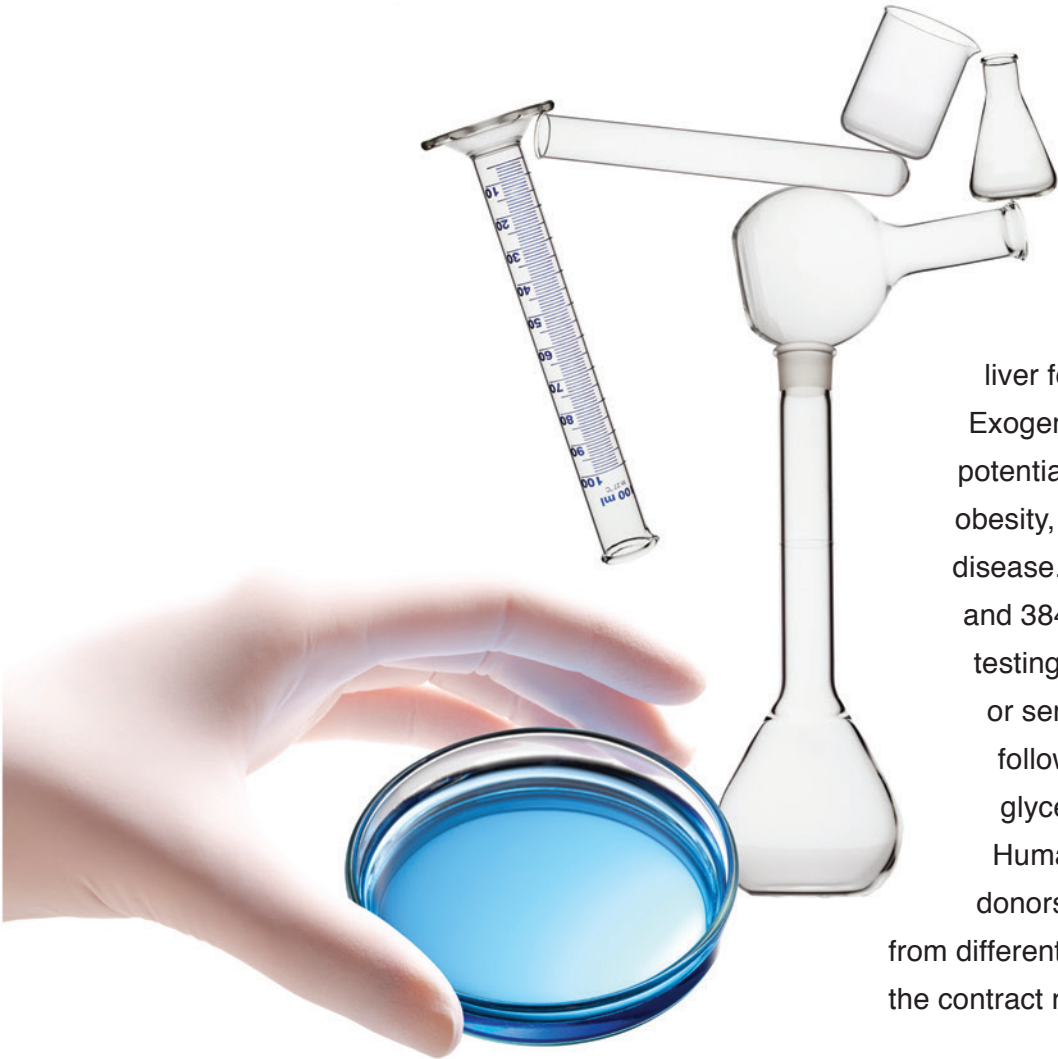
human glucose uptake assay service

ZenBio can perform glucose uptake assays in its human adipocyte system to identify agents impacting diabetes and obesity. We format our assay in 96-well plates to increase throughput and can investigate the stimulation, inhibition, and sensitization of glucose uptake. Through our procurement network, we offer this assay service using cells from donors of differing demographics (gender, BMI, ethnicity), disease states (Type 2 diabetes, hypertension) and from different adipose depots (subcutaneous, omental, and mesenteric).

consulting services ZenBio's contract assay services combine the expertise of our scientists with our array of validated primary human cells and systems. We offer a variety of assays and years of experience to assist you in better understanding the methods of actions for a targeted compound.

lipolysis assay service

Lipolysis, the hydrolysis of triglycerides to glycerol and free fatty acids, plays a central role in the regulation of energy balance. Fatty acids released from adipocytes can be carried to tissues requiring energy while glycerol can be utilized by the liver for glycolysis or gluconeogenesis. Exogenous lipolysis regulators are potentially useful in the treatment of obesity, diabetes and cardiovascular disease. We format our assays in 96-well and 384-well plates for high throughput testing of lipolysis stimulation, inhibition, or sensitization. Lipolysis can be followed by analyzing the release of glycerol, free fatty acids, or both. Human adipocytes are available from donors with varying demographics and from different adipose depots as required by the contract researcher.



lipid accumulation assay service Adipocytes are important in maintaining proper energy balance by storing energy through lipid accumulation. Human preadipocytes respond to hormonal and growth factor signals, leading them to differentiate and accumulate lipid as triglyceride. Sensitizers of differentiation are potentially useful in the treatment of diabetes and cardiovascular disease, while inhibitors are potentially useful in the treatment of obesity. We format our assay in 96-well plates using preadipocytes from donors of varying demographics and from different adipose depots. The assay can be used to identify activators, inhibitors, or sensitizers of lipid accumulation during differentiation.

pancreatic islet screening services Insulin secretion from the pancreas is critical for the normal regulation of serum glucose and tissue energy homeostasis. Pancreatic islets are the site of insulin secretion through a complex interaction between several cell types. When human islet function is impaired or unregulated, insulin secretion is affected which may lead to insulin resistance or diabetes. Services include: GSIS Glucose-Stimulated Insulin Secretion Assays, Customized Gene Expression Studies, Islet Maintenance, Anti-Apoptosis Assays, Islet Screening Assays, and RNA Isolation / Total Cell Extract Services.

steatotic hepatocytes for drug discovery Non-alcoholic fatty liver disease (NAFLD) is a chronic hepatic disorder affecting up to 25% of the general population. A major component of NAFLD is excessive lipid accumulation in hepatocytes (hepatic steatosis). ZenBio has established a high throughput steatotic hepatocyte platform for drug discovery. Current cell-based assays using this model include lipid accumulation, analysis of intracellular signaling pathways, gene expression, cytokine secretion, cellular toxicity, high content imaging, and metabolomic profiling.

mechanism of action studies ZenBio scientists have extensive experience in obesity, diabetes and metabolic disease research that can help with your mechanism of action studies. You can leverage this expertise for experimental design, assay development and validation, data analysis and downstream applications. We have worked with numerous companies, large, small and virtual, to identify and interrogate the pathways modulated by their lead compounds and clinical candidates. ZenBio can design, develop, validate and perform your preclinical studies to identify or support your mechanism of action studies.



adiponectin assay service Adiponectin is a protein hormone secreted by adipose tissue (adipokine) that modulates several metabolic processes. Adiponectin secretion is decreased in obesity and Type 2 diabetes and correlates with the onset of insulin resistance and hyper-insulinemia. Our assay measures the effects of agents on human adipocytes plated in 96-well microplates. Mature cultured adipocytes from donors of varying demographics and different adipose depots can be used to identify selective compound effects. The secretion of adiponectin is measured by a quantitative ELISA.

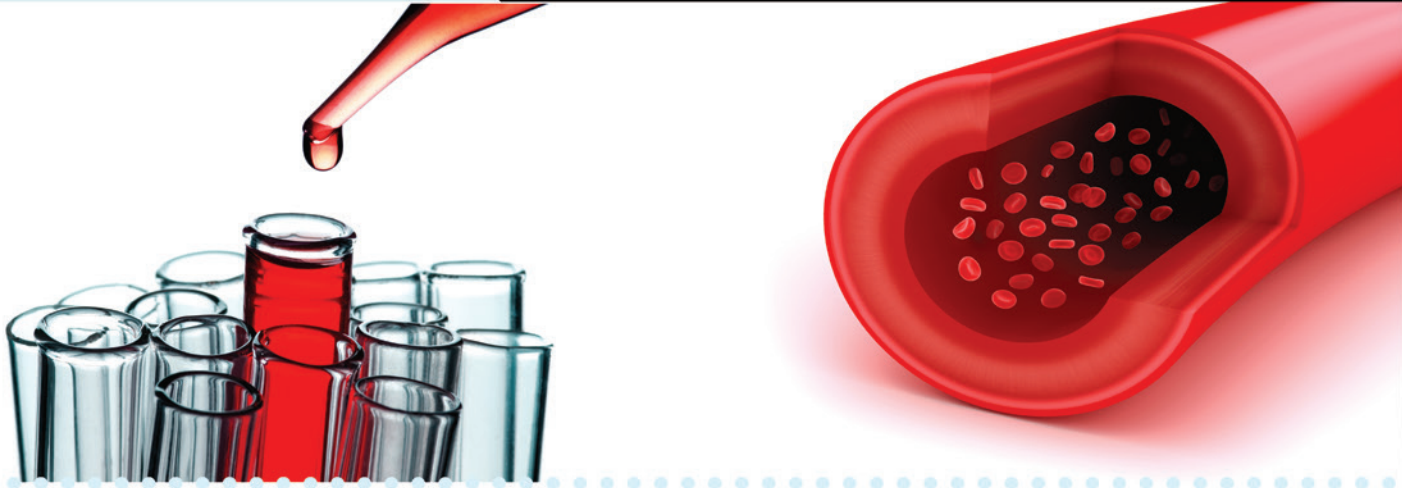
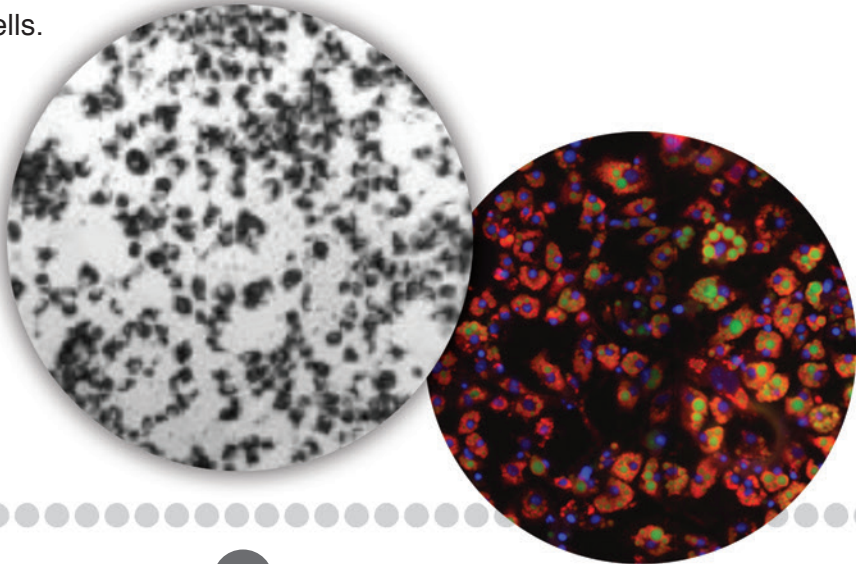
serum/plasma fatty acid & glycerol detection assay service The level of non-esterified fatty acids (NEFA) and glycerol in serum or plasma is indicative of endogenous or induced adipocyte lipolysis. Fatty acids and glycerol are released by adipocytes in response to lipolytic hormones and enter the bloodstream for utilization by other tissues. ZenBio can analyze human or animal serum/plasma samples for their NEFA and/or glycerol content.



3T3-L1 murine adipocytes assay service and cells 3T3-L1 murine adipocytes are commonly used as surrogates for human adipocytes. ZenBio offers contract assay services using low passage 3T3-L1 adipocytes either alone or in direct comparison with human adipocytes. We offer the following assay services: Insulin-Stimulated Glucose Uptake, Lipolysis, and Triglyceride Accumulation. All of these assays are formatted in 96-well plates to increase throughput and are fully customizable for specific research requirements.

Our Custom L1 media is designed for consistent performance of 3T3-L1 cells.

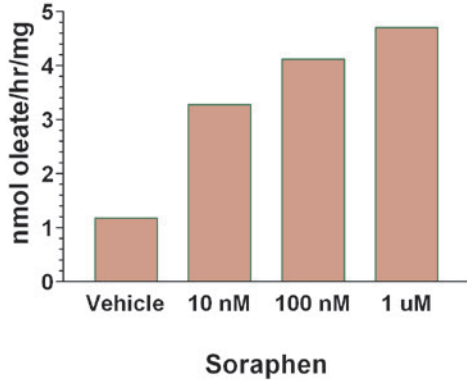
2 week old 3T3-L1 adipocytes
(14 days post-differentiation)

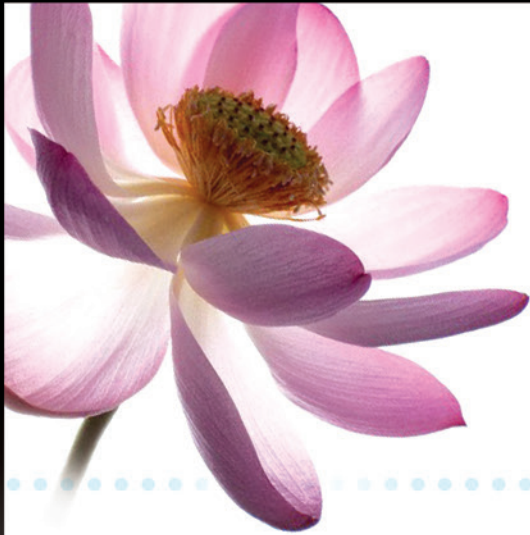


insulin-stimulated glucose uptake in skeletal muscle/fatty acid oxidation in skeletal muscle

ZenBio now offers contract assay services using its human primary skeletal muscle cell system. Skeletal muscle is the primary site of glucose disposal, comprising up to 70-80% of insulin-stimulated glucose uptake, and is the major site of obesity-related insulin resistance. Other activities relating to skeletal muscle cell metabolic responsiveness include fatty acid oxidation, glucose oxidation, and glycogen synthesis. All of these assays are available through ZenBio's contract assay services. They are performed using skeletal muscle cells in 24-well plates. The primary cells are derived from donors of differing demographics that may allow researchers to investigate the effects of their compounds across a range of donors.

fatty acid oxidation in human skeletal muscle cells Soraphen induces a dose dependent increase in fatty acid oxidation in human skeletal myotubes. Radiolabeled carbon dioxide is captured, quantified and normalized to cellular protein.

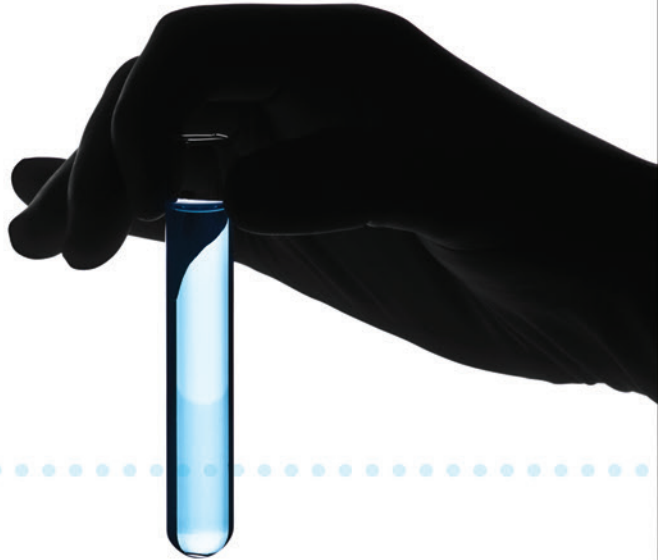




cosmetic screening ZenBio has performed contract assay services for cosmetic companies to identify additives with beneficial properties. Using our human adipocyte cell system, dermal fibroblasts, and keratinocytes, we can investigate the effects of natural products, extracts, and compounds for their use in diminishing (the) signs of aging, reducing the appearance of wrinkles, and protecting skin from environmental stressors.

primary skin cell assay ZenBio also offers human dermal fibroblasts and keratinocytes, melanocytes, sebocytes, eccrine cell for testing the effects of cosmetic additives. We can assess test samples for their effects on cell proliferation and cytotoxicity using these primary cells. This information is useful for determining dosing limits and avoiding unwanted side effects on the skin.

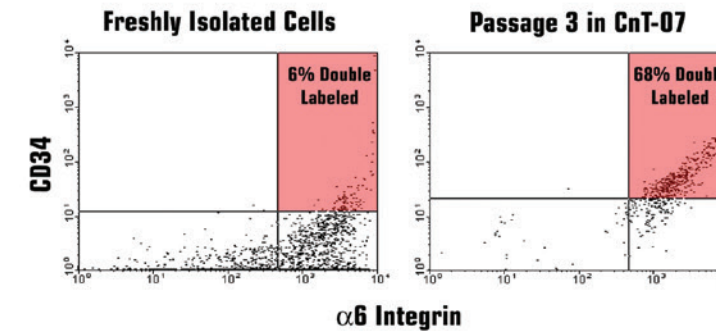
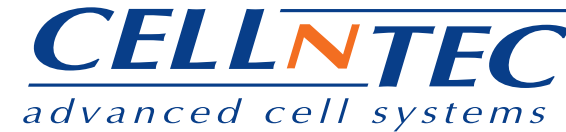
- ANTIOXIDANT ASSAYS (ABTS and ORAC)
- MELANOGENESIS ASSAY (B16)
- ELASTIN AND HYALURONIC ACID PRODUCTION
- COLLAGEN PRODUCTION (IN VITRO / EX VIVO)
- SKIN EXPLANT STUDIES
- GENE EXPRESSION OF TARGET GENE
- WESTERN BLOT ANALYSIS OF SPECIFIC PROTEINS
- MIGRATION ASSAY AND WOUND REPAIR



skin ZenBio has developed a dedicated solutions platform delivering products, services and expertise to assist in the emerging and diverse research field of skin. From initial donor-specific tissue acquisition to full thickness skin testing or 3D skin equivalents, the ZenBio research team can deliver dermal research capabilities to accelerate client projects and meet objectives rapidly in a cost-effective approach minimizing time, and resources.

- ZenSkin Cells & Media Solutions
- Matched Donor: Keratinocytes / Dermal Fibroblasts
- Melanocytes
- Sebocytes
- Sweat glands
- Cell Screening & Testing Services
- Custom Cell and Tissue Solutions- Cell Lines
- Explant Cultures
- Custom Procurement
- Fresh / Frozen / Fixed Full Thickness Human Skin





This figure shows the results of a FACS experiment, in which the percentage of double labeled progenitor cells was evaluated in both freshly isolated keratinocytes and in keratinocytes grown in CnT-07 for 3 passages. In freshly isolated cells, 6% of the population were progenitor cells. After 3 passages, this had increased to 68%, a 10-fold increase.

Improved isolation, proliferation and longevity. CELLnTEC's defined Progenitor Cell Targeted media provide all these benefits, enabling you to work faster and smarter.

How does Progenitor Cell Targeting work?

PCT media work by specifically targeting and retaining increased numbers of progenitor cells in vitro.

The Benefits of Progenitor Cell Targeting

- Cut your primary culture expansion time by up to one-third
- No more feeder cells, conditioned media or non-defined additives
- Extended in vitro lifespan

- Epidermal Keratinocyte Media
- Prostate Epithelium Media
- Airway Epithelium Media
- Mammary Epithelium Media
- Corneal Epithelium Media

- Oral Epithelium Media
- Vaginal Epithelium Media
- Bladder Epithelium Media
- Fibroblast Culture Media

CELLnTEC currently has long-term guaranteed cell systems available from a range of human and animal species.

- Epidermal Cell Systems
- Vaginal Cell Systems
- Bladder Cell Systems
- Fibroblast Cell Systems
- Corneal Cell Systems

Most CELLnTEC mono-layer cell systems may also be grown in lifted culture to form 3-D models.

These models accurately model the in vivo situation, and can be generated from the same progenitor-cell system over many years providing excellent comparability and cost-effectiveness.

- Epidermal 3D Cell Systems
- Vaginal 3D Cell Systems
- Airway 3D Cell Systems
- Bladder 3D Cell Systems

custom procurement ZenBio offers cells, tissues, and serum from a diverse group of donor populations. Products are available from mixed donor lots, individual donor lots, and a variety of disease states, such as Type 2 diabetes, hypertension, and others. ZenBio can often provide additional value added information, such as blood panels and history of disease. In the event we do not have samples from a donor demographic that meets your needs, we are able to custom tailor a solution.

If your discovery effort requires access to serum, multiple tissue types, current medications, a patient's deidentified medical history or patients from a variety of disease states, we are able to accommodate that request. All of our tissues are collected under IRB approved protocols from fully consented patients. ZenBio partners with surgical teams across the country to help ensure access to the broadest array of patient demographics and disease states.

In addition to demographic or tissue specific custom procurement, ZenBio is capable of delivering all the following from a single patient: 5 ml serum, 1g flash frozen adipose tissue, 1g flash frozen skeletal muscle tissue, skeletal muscle RNA, adipose tissue RNA, cryopreserved and plated skeletal muscle cells, cryopreserved and plated preadipocytes, plated adipocytes, blood panel, medication list and deidentified medical history.

custom culture services ZenBio offers an extensive array of cell types and plate formats in our catalog. When you require a cell type or plating format not currently listed, please let us know. We will work with our surgical partners to obtain various additional tissue types as well as isolate various cell types from tissue we currently receive.

Some examples of custom plating include switching plate types to ones that may be used for automated, radioactive, or luminescent assays, as well as special plating requests such as culturing cells on gelatin coated glass cover slips.

In addition to offering cells plated in nearly any format, we have custom plating and screening packages available. Screening packages of 500 or more plates of differentiated passage 4 cells enable cost effective screening of compound libraries in a human cell system. ZenBio's pricing for our million point screening package starts at under 25 cents per point.



distributors ZenBio's products are currently distributed internationally by a number of qualified companies. If you wish to order direct you may do so, however we encourage using one of our authorized distributors.

shipping Direct shipments are FOB destination. Freight charges are generally prepaid and added to your invoice. Please contact your distributor for their shipping policy.

ZenBio uses FedEx priority next day service. However, our Customer Support Team will work with you to determine the best shipping method for your individual needs. We strive to have every order shipped on time and delivered to you in perfect condition.

contact & technical support

Toll Free: 1-866-ADIPOSE (1-866-234-7673)
Telephone: (919) 547-0692
Fax: (919) 547-0693
E-mail: information@zenbio.com
Website: zenbio.com

ZenBio does not operate with a phone tree or voice mails. We do this in order to provide you with the quickest response to your research questions. When you call ZenBio during business hours, a person will always answer your call.

* ZenBio is GLP compliant and certified



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