ATHENS™
RESEARCH & TECHNOLOGY

INVITRO DIAGNOSTICS

Delivering High-Quality Native Proteins to Drive Innovation in IVD

We are dedicated to providing the In Vitro Diagnostic (IVD) industry and researchers with premium-grade, highly pure, and highly active native proteins. Our rigorous manufacturing processes and commitment to quality assurance enable our clients to develop reliable, accurate diagnostic tools for today's healthcare demands.

Why Choose Athens?

1. **Proven Success in Diagnostic Applications**
Athens is a trusted provider of high-purity reagents for essential diagnostic applications, including Lipoprotein and Globulin panels, Hemoglobin A1c standards, and targeted disease tests for cardiovascular, pulmonary, and autoimmune disorders. Our proteins are carefully manufactured to ensure the accuracy and sensitivity essential to advanced diagnostics.

2. **Superior Purity & Activity**
Our native proteins are produced to achieve exceptional levels of purity and activity, enhancing performance in critical diagnostic applications. Each product is rigorously tested to meet the stringent quality standards our clients depend on.

3. **Reliable Sourcing & Consistent Supply**
With a dependable supply chain and a commitment to reliable delivery, Athens ensures that IVD manufacturers can count on a steady supply of premium proteins, maintaining continuity for their production needs.

4. **Expertise You Can Trust**
With decades of experience in protein purification, Athens has developed a reputation for scientific excellence. Since 1985 our knowledgeable team has worked hand-in-hand with clients, providing the insights and expertise needed to help them succeed.

5. **Customization to Meet Unique Requirements**
Recognizing that each diagnostic solution is unique, Athens offers customized protein products tailored to meet specialized client needs, ensuring our proteins integrate smoothly into various diagnostic assays and workflows.

6. **Comprehensive Product Support**
From initial selection to application, our team provides comprehensive support, guiding you through each phase. We are dedicated to the success of your diagnostic solutions, every step of the way.

Our Role in Global Health Progress

Driven by a mission to elevate diagnostic science, Athens Research continuously improves the performance and precision of IVD solutions. By delivering superior proteins, Athens Research plays a crucial role in empowering researchers and diagnostic companies to create IVDs that keep pace with the dynamic needs of global healthcare. Below is a list of Athens' proteins currently used or poised to be used as biomarkers in the IVD Industry.

- **Albumin**
- **Alpha 1 Antitrypsin**
- **Alpha 1 Acid Glycoprotein**
- **Alpha 2 Macroglobulin**
- **Apolipoproteins**
  - AI & AII
  - B & E
  - CII & CIII
- **Butyrylcholinesterase (BChE)**
- **C-Reactive Protein (CRP)**
- **Catalase**
- **Ceruloplasmin**
- **Complement C3 & C4**
- **Haptoglobin (1-1, 2-2, Mixed)**
- **Hemoglobin A1c**
- **Hemopexin**
- **Immunoglobulins**
  - IgA (IgA1 and IgA2)
  - IgE
  - IgG (IgG 1 – 4, Fc, Fab)
  - IgM (Fc5 µ, Mu Chain)
  - RF-IgM
- **Lactoferrin**
- **Lipoproteins**
  - HDL & LDL
  - Lipoprotein(a)
- **Myeloperoxidase (MPO)**
- **Prealbumin/Transthyretin**
- **Proteinase 3 (PR3)**
- **Retinol Binding Protein**
- **Superoxide Dismutase (SOD)**
- **Transferrin**

Academic research highlights the pivotal contributions of proteins from Athens Research & Technology in driving forward in vitro diagnostic (IVD) technologies. Athens' proteins have enabled research into biomarkers like butyrylcholinesterase (BChE[1,8]), a potential indicator of sudden infant death syndrome (SIDS)[1], and MPO[2], an antigen for autoimmune-related vasculitis. Furthermore, proteins such as defensins and lactoferrin have been used to validate preterm birth risk biomarkers[3], and neutrophil elastase has supported biosensor validation for conditions linked to HNE4. Cutting-edge methods, including MALDI-TOF mass spectrometry[5], and microfluidic Devices[3,6], utilize Athens' proteins to advance diagnostic technology with greater sensitivity, speed, and accuracy.

Moreover, Athens' contributions extend to enabling innovative diagnostic approaches, including breath-based biosensors[5], rapid ELISA assays[7], and antibody production for a range of applications from Alzheimer's diagnostics[8], Cardiovascular[7] or Pulmonary Diseases[5]. Athens' proteins, crucial to the IVD industry, empower researchers and diagnostic companies worldwide to develop next-generation solutions that address evolving global healthcare challenges.

Contact Us Today

Visit us at **www.active-bioscience.de** to learn more about our product offerings or speak to our experts to see how Athens Research & Technology can support your diagnostic solutions.

ATHENS™ RESEARCH & TECHNOLOGY

Manufacturer
U.S. Office
110 Trans Tech Drive
Athens, Georgia, 30601
+1.706.546.0207
sales@athensresearch.com

ACTIVE BIOSCIENCE
PROTEINS · CELLS · ANTIBODIES

Distributor
Active Bioscience GmbH
Oberaltenalleee 8
D-22801 Hamburg, Germany
+49.404.320.8448.0
info@active-bioscience.de

1. Harrington, et al. Butyrylcholinesterase is a potential biomarker for Sudden Infant Death Syndrome. eBioMedicine 2022;80: 104041. https://doi.org/10.1016/j.ebiom.2022.104041 The Children's Hospital at Westmead, Australia

2. McCall, et al. Inhibitory Anti-Peroxidasin Antibodies in Pulmonary-Renal Syndromes. J Am Soc Nephrol 29: 2619–2625, 2018. https://doi.org/10.1681/ASN.2018050519 Vanderbilt University Medical Center, USA & Burlingame, et al. (2016). Antineutrophil Cytoplasmic Antibodies (ANCA) and Strategies for Diagnosing ANCA-Associated Vasculitides. Manual of Molecular and Clinical Laboratory Immunology (eds B. Detrick, J.L. Schmitz and R.G Hamilton). https://doi.org/10.1128/9781555818722.ch94 USA

3. Bickham, et al. 3D Printed Microfluidic Devices for Solid-Phase Extraction and On- Chip Fluorescent Labeling of Preterm Birth Risk Biomarkers. Anal. Chem. 2020, 92, 12322–12329. https://dx.doi.org/10.1021/acs.analchem.0c01970 Brigham Young University, USA

4. González-Fernández, et.al. Electrochemical sensing of human neutrophil elastase and polymorpho-nuclear neutrophil activity. Biosensors and Bioelectronics, Volume 119, 2018, Pages 209-214, https://doi.org/10.1016/j.bios.2018.08.013 / University of Edinburgh, Scotland

5. Chen, et al. A breath-based in vitro diagnostic assay for the detection of lower respiratory tract infections. PNAS Nexus, 2024, 3, pgae350. https://doi.org/10.1093/pnasnexus/pgae350 / Maryland, USA

6. Achille, et al. 3D Printing of Monolithic Capillarity-Driven Microfluidic Devices for Diagnostics. Adv. Mater. 2021, 2008712. https://doi.org/10.1002/adma.202008712 / KU Leuven, Belgium

7. Contois, et al. Lipoprotein(a) particle number assay without error from apolipoprotein(a) size isoforms. Clinica Chimica Acta 505 (2020) 119–124. https://doi.org/10.1016/j.cca.2020.02.030 / Sun Diagnostics, USA

8. Wang, et al. Butyrylcholinesterase-Activated Near-Infrared Fluorogenic Probe for In Vivo Theranostics of Alzheimer's Disease. J. Med. Chem. 2024, 67, 6793–6809. https://doi.org/10.1021/acs.jmedchem.4c00355 / China Pharmaceutical University