Dear customer, we would like to introduce our new products and hope you will find them interesting. Below is a list of events, in which we plan to participate in 2014:

15. ÖAG Jahrestagung (24 \ 10 \ 2014 - 25 \ 10 \ 2014 - Vienna)
NCA NUBIN 2014 Symposium (29 \ 10 \ 2014 - 30 \ 10 \ 2014 – Amsterdam)
ÖGAI Jahrestagung (06 \ 11 \ 2014 - 08 \ 11 \ 2014 - Salzburg)
5. Jahrestagung der Österreichischen Gesellschaft für Laboratoriumsmedizin und Klinische Chemie (11 \ 11 \ 2014 - 14 \ 11 \ 2014 – Salzburg)
MEDICA (12 \ 11 \ 2014 - 15 \ 11 \ 2014 – Düsseldorf)
2nd World Congress on Clinical Lipidology (05 \ 12 \ 2014 - 07 \ 12 \ 2014 – Vienna)

FEATURED PRODUCT: HUMAN GLUCOSE-REGULATED PROTEIN 78 ELISA

Human Glucose Regulated Protein 78 (GRP78) also known as BiP (immunoglobulin heavy-chain binding protein) or HSPA5 is a constitutively expressed protein from the HSP70 heat-shock protein family. It exists in two isoforms, the standard isoform of 78 kDa constituted of 636 amino acids and the short GRP78va isoform of 62 kDa.

Human GRP78 is a multifunctional protein involved in protein folding, calcium binding in the endoplasmic reticulum (ER), cellular defense mechanism, and antiapoptotic response of cells. It was reported to function as a cell-surface receptor in some cells. It is predominantly expressed in the endoplasmic reticulum, but it has also been found in other cellular compartments and in extracellular fluids.

The expression of GRP78 is not tissue-specific. It is induced by hypoglycemia, hypoxia and some other cytotoxic stresses. Accordingly, elevated expression of GRP78 was reported under pathological conditions in tissues with insufficient blood supply (e.g. myocardial infarction, pre-eclampsia, tumors), but also different nephropathies, neuropathies or atherosclerosis. It is believed to be one of the key regulators of cellular invasion and angiogenesis in developing precancerous and cancerous tissues, and it has been detected in the extracellular microenvironment of these tissues. Experiments in mouse models revealed that it is required for optimal metabolic turnover of lipids and glucose.

GRP78 protein and its antibodies circulate in the blood of healthy individuals in small amounts. The precise mechanism of GRP78 relocation from tissues into the blood stream is not fully understood, nevertheless, concentrations of GRP78 in serum vary significantly within the population. The expression of different HSP proteins, including GRP78, is also elevated during inflammation. Consequently, the HSP proteins are released into the blood stream where they interact with different pro- and anti-inflammatory factors. Accordingly, the level of GRP78 protein and the level of anti-GRP78 antibodies were reported to be reproducibly increased in individuals suffering with rheumatic arthritis, a model autoimmune disease. In those individuals GRP78 and its antibodies can also be detected in both synovial fluid and saliva.


RELATED PRODUCTS
RD184230100 Glucose-Regulated Protein 78 Human, Sheep Polyclonal Antibody
RD17223010 Glucose-Regulated Proetin 78 Human E. coli
**NEW IMMUNOASSAYS**

<table>
<thead>
<tr>
<th>CAT. NO.</th>
<th>NAME</th>
<th>IVD/RUO</th>
<th>ASSAY FORMAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD191328200R</td>
<td>Human Apoptosis Inhibitor of Macrophage ELISA</td>
<td>ELISA</td>
<td>RUO Sandwich ELISA, Biotin-labelled antibody</td>
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<tr>
<td>RTC009R</td>
<td>Rat Estradiol ELISA</td>
<td>ELISA</td>
<td>RUO Competitive ELISA, Immobilized antigen</td>
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<tr>
<td>RD191230200R</td>
<td>Human Glucose-Regulated Protein 78 ELISA</td>
<td>ELISA</td>
<td>RUO Direct ELISA, Biotin-labelled antibody</td>
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<td>RAIO07R</td>
<td>Mouse Insulin ELISA, Ultra Sensitive</td>
<td>ELISA</td>
<td>RUO Sandwich ELISA, HRP-labelled antibody</td>
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<td>RAIO08R</td>
<td>Rat Insulin ELISA, Ultra Sensitive</td>
<td>ELISA</td>
<td>RUO Sandwich ELISA, HRP-labelled antibody</td>
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<tr>
<td>RAIO03R</td>
<td>Mouse Insulin ELISA, Wide Range</td>
<td>ELISA</td>
<td>RUO Sandwich ELISA, HRP-labelled antibody</td>
</tr>
<tr>
<td>RAIO04R</td>
<td>Rat Insulin ELISA, Wide Range</td>
<td>ELISA</td>
<td>RUO Sandwich ELISA, HRP-labelled antibody</td>
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<tr>
<td>RAIO05R</td>
<td>Mouse Insulin ELISA, High Sensitivity</td>
<td>ELISA</td>
<td>RUO Sandwich ELISA, HRP-labelled antibody</td>
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<tr>
<td>RAIO06R</td>
<td>Rat Insulin ELISA, High Sensitivity</td>
<td>ELISA</td>
<td>RUO Sandwich ELISA, HRP-labelled antibody</td>
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<tr>
<td>RD191254200R</td>
<td>Human Placental Protein 13 ELISA</td>
<td>ELISA</td>
<td>RUO Sandwich ELISA, Biotin-labelled antibody</td>
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<tr>
<td>RAIO01R</td>
<td>Human Proteinase 3 (PR3) ELISA</td>
<td>ELISA</td>
<td>RUO Sandwich ELISA, HRP-labelled antibody</td>
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<tr>
<td>RAIO02R</td>
<td>Mouse Proteinase 3 (PR3) ELISA</td>
<td>ELISA</td>
<td>RUO Sandwich ELISA, HRP-labelled antibody</td>
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</tbody>
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**NEW DISTRIBUTION PRODUCTS**

In addition to our own products, Biovendor carefully selects high quality products from other companies to meet the needs of our customers. Our company expanded the current portfolio of new ELISA kits which can be found at the links below: [www.biovendor.com/distribution](http://www.biovendor.com/distribution) or [www.biovendor.com/_distribution](http://www.biovendor.com/_distribution)

* for Austria, Czech Republic, Slovak Republic and North America available only ** for Europe available only

**FEATURED PRODUCT: HUMAN FOLLISTATIN HEK293**

Follistatin (FST) is a monomeric glycosylated protein unrelated to inhibin. It is able to specifically bind activin and inhibit FSH release from pituitary cells. FST is encoded by a single gene which gives rise to various alternative splicing, glycosylation and proteolytic cleavage variants. The two main variants of FST are encoded through alternative splicing at the carboxyl-terminus. A 288-residue molecule terminates after the third FST domain, whereas a 315-residue form is extended by an extra exon to include a highly acidic 27-residue “tail.” Both are capable of binding activin. FST315 is the major isoform observed in the peripheral circulation. FST is produced and plays a regulatory role in the gonads, ovary, pituitary gland, pregnancy membranes, liver and kidney, and also circulates in blood. FST level increases in the third trimester and disappears postpartum. FST:activin ratio plays a role in inflammation severity, tissue remodelling and fibrosis in lungs, liver, and heart. Activin regulation by FST has a role in bone repair processes.

BioVendor's Follistatin is a recombinant human FST315 protein expressed in HEK293 cell line. The protein has been lyophilized from 0.075 M NaCl/ 0.05 M phosphate buffer and does not contain any inert proteins or antimicrobial agents.

**12 % SDS-PAGE separation of Human FST (HEK293):**

1. M.W. marker – 14, 21, 31, 45, 66, 97 kDa
2. Reduced and boiled sample, 2.5 μg/lane
3. Non-reduced and non-boiled sample, 2.5 μg/lane

**RELATED PRODUCTS**

- RD193168200R  Follistatin Human ELISA
- RD172168100  Follistatin Human E. coli
- RD184168100  Follistatin Human, Sheep Polyclonal Antibody
## NEW RECOMBINANT PROTEINS

<table>
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<tr>
<th>CAT. NO.</th>
<th>NAME</th>
<th>SIZE</th>
<th>SOURCE</th>
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</thead>
<tbody>
<tr>
<td>RD172410100</td>
<td>Human 6-phosphogluconate dehydrogenase, decarboxylating</td>
<td>0.1 mg</td>
<td>E. coli</td>
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<tr>
<td>RD172406100</td>
<td>Human Aminoacylase-1</td>
<td>0.1 mg</td>
<td>E. coli</td>
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<tr>
<td>RD172392100</td>
<td>Human ATPase Inhibitor Mitochondrial</td>
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<td>E. coli</td>
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<tr>
<td>RD172328100-HEK</td>
<td>Human CD5 antigen-like</td>
<td>0.1 mg</td>
<td>HEK293</td>
</tr>
<tr>
<td>RD172394100-HEK</td>
<td>Human Collagen triple helix repeat-containing protein 1</td>
<td>0.1 mg</td>
<td>HEK293</td>
</tr>
<tr>
<td>RD172394100</td>
<td>Human Collagen triple helix repeat-containing protein 1</td>
<td>0.1 mg</td>
<td>E. coli</td>
</tr>
<tr>
<td>RD172168025-HEK</td>
<td>Human Follistatin</td>
<td>0.025 mg</td>
<td>HEK293</td>
</tr>
<tr>
<td>RD772356100</td>
<td>Human Helicobacter pylori Neutrophil-activating Protein A</td>
<td>0.1 mg</td>
<td>E. coli</td>
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<tr>
<td>RD272006100</td>
<td>Mouse Procalcitonin</td>
<td>0.1 mg</td>
<td>E. coli</td>
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<tr>
<td>RD872006100</td>
<td>Rhesus Procalcitonin</td>
<td>0.1 mg</td>
<td>E. coli</td>
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<tr>
<td>RD172416100</td>
<td>Human Ubiquitin Carboxyl-Terminal Hydrolase Isozyme L1</td>
<td>0.1 mg</td>
<td>E. coli</td>
</tr>
</tbody>
</table>

## BIOMEDICAL SPECIMEN BANK

Provides various types of biological samples along with **corresponding panels of data including analytical parameters**, anthropometric variables and clinical information **for the diagnostic industry, assay manufacturers and researchers**.

Our expanding portfolio of panels covers both **physiological** and **pathological conditions**. Samples are stored at **-150°C**, supplied on dry ice as **0.105 ml serum, urine or other body fluid**, assorted in 96 microplate-format boxes.

Below please find examples of panels we provide.

### A Assay Development and Validation
- **A1** Serum
- **A2** Urine
- **A3** Seminal Plasma
- **A4** Cerebrospinal Fluid
- **A5** Synovial fluid
- **A6** Saliva

### B Physiological Panels
- **B1** Body Mass Index Panel
- **B2** Age Panel
- **B3** Sex Panel
- **B4** Supine/Upright Panel
- **B5** Postprandial Panel
- **B6** Starvation Panel
- **B7** Exercise Panel
- **B8** Week of Pregnancy Panel
- **B9** Estrus/Menstrual Cycle Panel
- **B10** Newborn Panel
- **B11** Assayed Sera Panel

### C Disease State (Pathological) Panels
- **C1** Energy metabolism/Metabolic Syndrome/Obesity
- **C2** Diabetes
- **C3** Cardiovascular Disease
- **C4** Renal Disease
- **C5** Gastroenterology
- **C6** Neurology
- **C7** Pulmonary/Respiratory Disease
- **C8** Hepatology
- **C9** Cancer/Oncology
- **C10** Sepsis
- **C11** Trauma
- **C12** Immune Response
- **C13** Autoimmunity
- **C14** Infectious Diseases
- **C15** Reproduction
- **C16** Osteoporosis

For more information please go to [www.biomedicalsSpecimenbank.com](http://www.biomedicalsSpecimenbank.com) or download our leaflet for **BioMedical Specimen Bank**.

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