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Newsletter

YASHRAJ BIOTECHNOLOGY LTD.®
a bio-quest for ever

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Yashraj Biotechnology Ltd.

Yashraj Biotechnology Newsletter

Inside the issue-

- **Message from the promoter Directors**
- **About Science**
- **Our Products**
- **Medica-2015**

Glypican-1 : A potential biomarkers for early detection of pancreatic cancer

Elegant studies published in nature by Sonia A. Melo et.al suggest that a cell surface proteoglycan, glypican-1 (GPC1), specifically enriched on cancer-cell-derived exosomes. In the models of pancreatic cancer with study suggests that (GPC1), could be a very specific biomarker for pancreatic cancer. GPC1 could serve as a potential non-invasive diagnostic and screening tool for detection of pancreatic cancer.

This report opens up a new avenue to further investigation and explore of exosomes as a source of specific biomarkers.

Reference:
http://www.nature.com/nature/journal/v523/n7559/full/nature14581.html

Dear Readers,

Welcome to our third newsletter of 2015! It's indeed a moment of great pleasure to release the third edition of our Newsletter.

In the third quarter of year, our R & D team was successful in purifying recombinant human defensin, Calprotectin. We also performed scale up studies of native PSA-ACT and Kappa/Lambda Light Chains. Stabilities studies for PSA-ACT and Kappa/lambda chains are underway and we will soon launch the products.

We have also undertaken wide variety of purification projects, covering various domains of diseases areas, some of these products are recombinant Procalcitonin, P-53, IL-6 and Myoglobin.

We are pleased to announce our collaboration with a Russian company Semiotik for our clinical diagnostic projects on novel glycan identification.

Thank you for all your support.

Season's greetings and best wishes for the coming year.

(Arvind K. Bhanushali, Bharat T. Dagha, Paresh B. Bhanushali)
Promoter Directors

Our collaboration with Semiotik

Yashraj Biotechnology has collaborated with Semiotik (Russian company) on studies of Glycan chip. These chips are used for the quantitative determination of glycan-binding proteins in patient samples. Our preliminary studies suggest that glikochip from Semiotik, which contains 400 glycans, binds to the several of our antibodies. This methodology can be used for the clinical studies of infectious diseases, autoimmune diseases, cancer and other disease conditions, where glycan or altered modifications plays role in disease progression.

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Human Prolactin
(Catalog No: FrPRLy-71)

Prolactin (PRL) is a peptide hormone produced by the pituitary gland and various extra pituitary sites. PRL has been shown to be associated with the modulation of a variety of actions in the immune response and inflammatory processes in several pathological conditions (Fig-1).

Route of Production: Recombinant

Human Prolactin : SDS PAGE

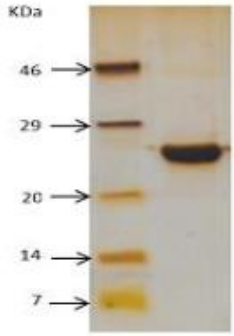

Fig-1

Lane1- Marker
Lane 2-Prolactin

Human beta-defensin-2
(Catalog No: FrB2D-68)

Human beta-defensin-2 (HBD-2) is a cationic antimicrobial peptide. It is produced by epithelial cells and shows potent antimicrobial activity bacteria. It plays a crucial role in and respiratory tract from infection (Fig-2).

Route of Production: Recombinant

SDS-PAGE profile : Defensin β-2

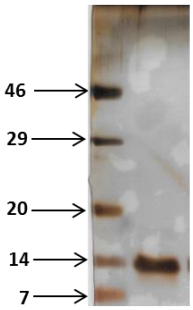

Fig-2

Lane 1: Marker
Lane 2: Defensin β-2

Human placental ferritin (PLF)
(Catalog No: FPF-39)

Human placental ferritin (PLF) is a heteropolymer comprise of a 28-kDa subunit of ferritin light chains. Placental ferritin acts as a physiological immunoregulator during pregnancy. Elevated level of Human placental ferritin (PLF) is seen in the serum of pregnant women. Molecular weight of native form is observed around 450 kDa. (Fig-3)

Route of Production: Native

SDS PAGE profile: Ferritin

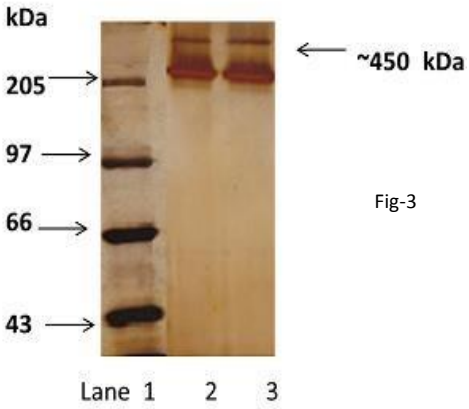

Fig-3

Lane1- Marker
Lane 2- FPF 0005
Lane 3-Control

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Autoimmune Disorder Biomarkers

Myelo peroxidase (MPO)
(Catalog No: FMP-24)

Myelo peroxidase enzyme. In humans, it is secreted by neutrophils during the myeloid differentiation. MPO is considered as a prognostic marker for the chronic vascular inflammatory disease. (Fig-4)

Route of Production: Native

15% SDS PAGE Profile of MPO (Part Pure)

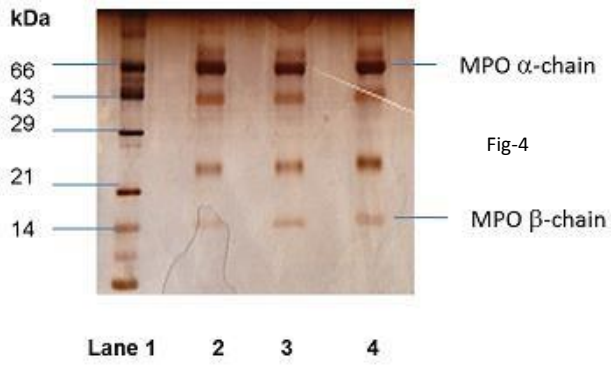

Fig-4

Lane 1- Mol. Wt. Marker
Lane 2- 2µg Batch 1
Lane 3- 2µg Batch 2
Lane 4- 2µg Batch 3

Proteinase-3 (PR3)
(Catalog No: FPR-35)

PR3 stands for Proteinase-3. PR3 belongs to the class of serine protease enzymes and its expression is seen in human neutrophils. PR-3 cytoplasmic antibodies (PR3-ANCA). Anti PR-3ANCA are believed to be a serologic marker in inflammatory bowel disease. (Fig-5)

Route of Production: Native

12 % SDS PAGE Profile of PR-3

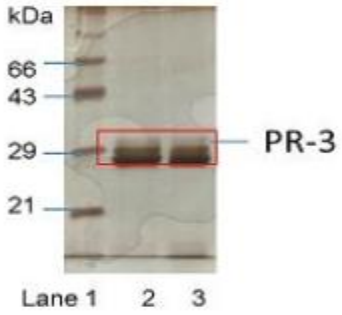

Fig-5

Lane 1- Mol. Wt. Marker
Lane 2- 2µg Batch 1
Lane 3- 2µg Batch 2
Lane 4- 2µg Batch 3

******Native TPO*** from Thyroid gland currently available with YBL**

Thyroid peroxidase (TPO) is an enzyme expressed mainly in the thyroid which plays a central role in the function of the thyroid gland. TPO assists the critical chemical reaction that adds iodine to a protein called thyroglobulin in generating thyroid hormones. Thyroid peroxidase is an epitope of autoantibodies (anti-TPO antibodies) in autoimmune thyroid disease which is most commonly associated with Hashimoto's disease.

Route of Production: Native

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NGAL

(Catalog No: FGAL-32)

NGAL is also known as Lipocalin-2 (neutrophil gelatinase associated lipocalin). It is an early and reliable indicator of acute kidney injury (AKI). In the recent past NGAL has emerged as an excellent prognostic marker for the AKI. During kidney injury, level of NGAL goes high in both plasma as well as urine. Since NGAL is resistant to protease, it is quite stable in the blood and serum. (Fig-6)

Route of Production: Native

Cystatin-C (High Pure)

(Catalog No: FCysC-15)

Cystatain C is a low molecular weight (13.4 KDa) protein. It functions as an inhibitor of various cysteine proteases. Serum cystatin C is considered to be a superior than serum creatinine as a marker of kidney function.(Fig-7)

Route of Production: Native

HE-4

We have also purified HE-4 (Human Epididymis-4) from the ascetic fluids of the cancer patients. HE-4 is a biomarker for the ovarian cancer. HE4 along with CA 125 is considered to be a better marker than either of them. (Fig-8)

Route of Production: Human Fluid

SDS PAGE profile: NGAL

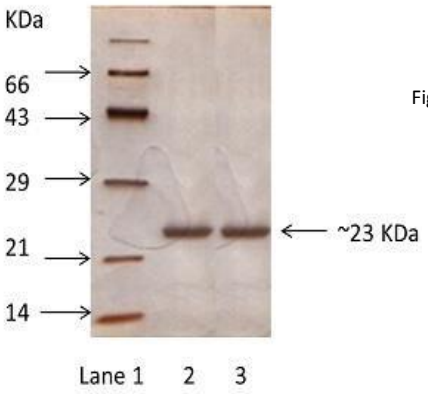

Fig-6

Lane1- Marker
Lane 2- FGAL0003
Lane 3-Control

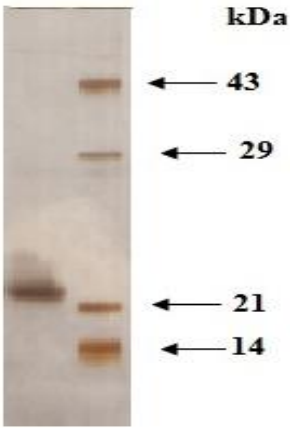

Fig-7

Lane-1- Cystatin-C
Lane-2- Marker

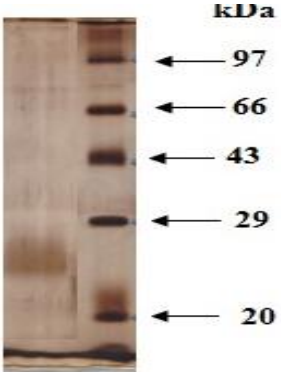

Fig-8

Lane-1- HE-4
Lane-2- Marker

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YBL-Top Cardiac/CVD Markers

YBL-Cardiac/CVD Markers	Route of Production
Galectin – 3	Recombinant
Troponin I	Recombinant
NT- Pro BNP	Recombinant
Pro- BNP	Recombinant
FABP-3	Recombinant
Apo-SAA	Recombinant
CRP	Native
Myeloperoxidase (MPO)	Native
D-Dimer	Native

YBL-Top Cancer Bio Markers

Biomarker	Route of production
CA 15-3	Native
CA 19-9	Native
CA 72-4	Native
CA125	Native
CEA	Native

Medica-2015: Meet Us

We are hoping for your presence in the annual gathering at Medica 2015 Germany! With the greatest pleasure, we can meet you in this event. Our R &D team would be happy to answer your queries and discuss the potential projects.

Our Contact :Mr. B.T. Dagha (Director- Global Business Development)
Email : bharat@yashrajbio.com

Our Booth: Hall -3/ Booth F 52

http://www.medica-tradefair.com/

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