



YASHRAJ
BIOTECHNOLOGY LTD.
a bio-quest for ever



Yashraj Biotechnology Newsletter: Anniversary Edition

Inside the issue-

- Message from the Promoter Directors
- About Science
- Our Products
- Come Make in India
- Medica-2014

Aptamers & Drug Discovery

Aptamers are short nucleic acid oligos with specific protein binding abilities to various biomolecules. It has been shown that aptamers can bind to various biological molecules such as cellular proteins, lipids and nucleic acid. They are seen as a potential tool to serve as both drugs and drug-carriers in theranostics. Recent publication by London GM et al. suggest that aptamers can inhibit the HIV-1 entry in the <http://www.ncbi.nlm.nih.gov/pubmed/25482445>. This opens up a new avenue to further explore use of aptamer in drug discovery programmes.

YBL clears the UL audit

UL (Underwriters Laboratories USA) conducted audit from 16th to 19th December 2014 at YBL. We are pleased to inform you that we successfully cleared UL audit of ISO13485:2003 and 9001:2008.

Dear Readers,

Welcome to our first News Letter of the year 2015! It is indeed a moment of great pleasure to release the anniversary edition of our Newsletter. It has been one year since we launched our newsletter. At the end of a wonderful year, we are pleased to share with you the success of our newsletter. Our newsletter has been warmly received all over by our customers and the R&D fraternity. It has also enabled us to keep our customers more updated, about our products.

In the last quarter of the year, we successfully purified recombinant human Prolactin & Troponin T. We were also successful in generating Monoclonal Antibodies against CA 125 and further studies are ongoing to test the stability and scale up.

We take this opportunity to wish you a Merry Christmas and Happy New Year. Thank you for all your support.

We look forward to consolidating our existing relationships and also forging newer relations and co-operations in the New Year.

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

Generation of antibodies against MUC1/Y

Our R&D team raised monoclonal antibodies against MUC1/Y antigen and carried out basic characterization of clones. In our studies we found our MUC1/Y antibodies are specific in nature.

Our finding was published in the IJPBS. Further attempts are being made to understand the specificity and binding kinetics of this antibodies.



Human Prolactin

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.

Route of Production: Recombinant

Human Prolactin : SDS PAGE

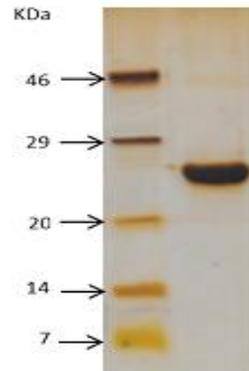


Fig-1
Lane1- Marker
Lane 2-Prolactin

Troponin T

Troponin T is a part of tropomyosine complex and facilitates binding of Troponin C with tropomyosin. Tropomyosin complex slides on the actin filament during the contraction of the muscles.

Troponin T is considered to be a gold standard biomarker for the cardiac injuries. It is considered to be more cardiac specific than Creatine Kinase and Lactate Dehydrogenase.

Route of Production: Recombinant

Human Troponin T: SDS PAGE

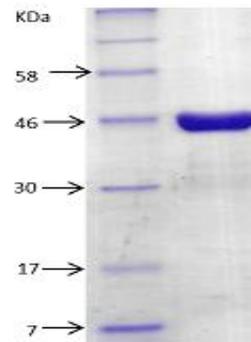


Fig-2
Lane1- Marker
Lane 2- Troponin T

CA 125 Mab: WESTERN BLOT ANALYSIS

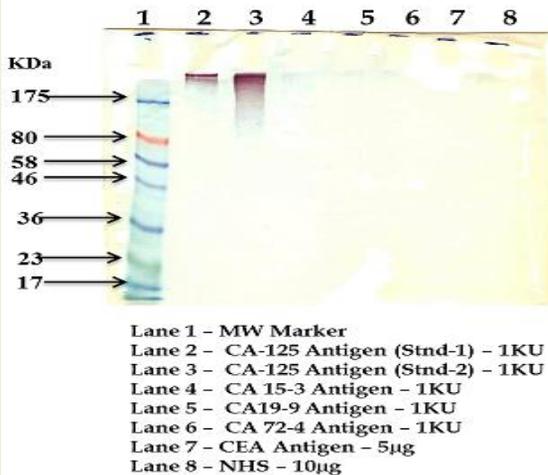


Fig-3

CA 125 Monoclonal antibodies

Our antibody development team succeeded in generating the mouse monoclonal antibodies against the cancer antigen CA 125. Initial WB studies suggest, our antibody recognizes the antigen on western blot. It also doesn't cross react with the other CA series antigens i.e CA 15-3, CA 19-9, CA 72-4, as well as CEA. In order to increase the wide utility, we are further characterizing our Mab clones for other assays such as SPR & ELISA.



B2M

B2M stands for the Beta-2-microglobulin. It is a globular protein and belongs to MHC class 1 family. B2M is found on all nucleated cells and shed into the blood stream. Elevated level of B2M is seen in the urine of patients during renal failure. B2M is considered to be a biomarker for monitoring the progression of renal disease to chronic renal failure.

Route of Production: Native

NGAL

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 diagnostic marker for the AKI. During kidney injury, level of NGAL goes high in both blood as well as urine. Since NGAL is resistant to protease, it is quite stable in the serum and urine.

Route of Production: Native

SDS PAGE Profile: B2M

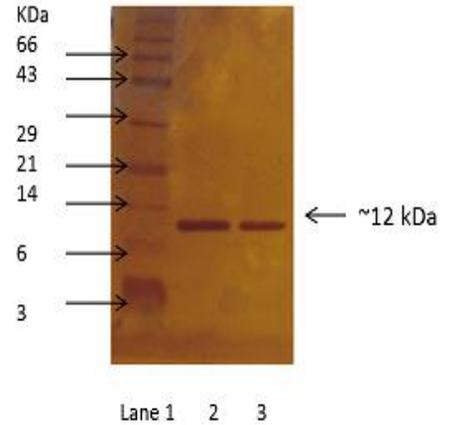


Fig-4

SDS PAGE profile: NGAL

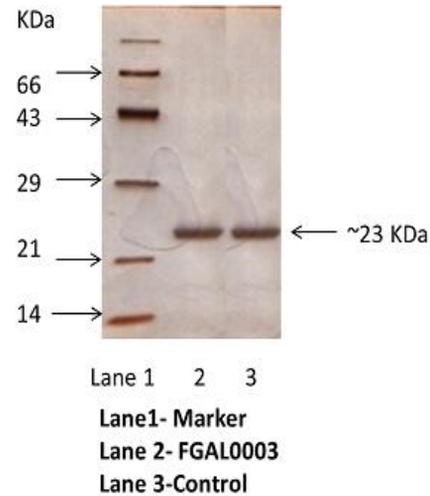


Fig-5

YBL- Biomarkers (Under R & D Phase)

Human Epididymis-4 (HE-4)	Ovarian Cancer
Complement Factor-3	Inflammation
Complement Factor-4	Inflammation
Kappa (κ) Chain	Lymphoma
Lambda(λ) Chain	Lymphoma

YBL sponsored an International Proteomics Conference



YBL was a platinum sponsor to the International Proteomics Conference held in IIT-Mumbai from 7th to 9th Dec, 2014. The core themes of the PSI conference were Cancer biomarkers, Biomarkers of bio fluids and Post-translational modifications.

Platinum Sponsors: Thermo Scientific, Yashraj Biotechnology, AB SCIEX, PBI Corporation.

PRINCIPAL SPONSORS: Agilent Technologies, Waters, GE Healthcare.

Diamond Sponsors: BIO-RAD, BROKER.

PUBLISHING PARTNERS: ELSEVIER, THE LEELA.

HOSPITALITY PARTNER: THE LEELA.

ALPCORD NETWORK: Your & Science's Strategic Company, TOURISM PARTNER.

ANALYTICAL SCIENTIST: MEDIA PARTNER.

WISDOM MEDIA SERVICES: MEDIA PARTNER.

THE NEW BOMBAY DESIGN: DESIGN PARTNER.



Come Make in India

Make in India campaign is launched to invite investment and promoting India as the next manufacturing capital. We as a one of the leading manufacturers of diagnostic reagents, would like to invite contract research to promote and fulfill the requirement of diagnostic reagents in the Health care sector.



Come Make in India

YBL with large scale state-of-art manufacturing facilities is a viable partner in your search for monoclonal antibodies and antigens.

Projects Undertaken

- ❖ Native Antigen Purification
 - ✓ Cancer Biomarkers
 - ✓ Infectious Biomarkers
 - ✓ Inflammation Biomarkers
 - ✓ Autoimmune Biomarkers
 - ✓ Allergy Biomarkers
 - ✓ Disease specific Biomarkers (e.g Cardiac, Renal)
- ❖ Recombinant antigens
 - ✓ Bacterial Expression System
 - ✓ HEK, CHO Expression System
- ❖ Cell derived Native antigens
- ❖ Generation & Purification of Antibodies
 - ✓ Mice Monoclonal
 - ✓ Rabbit Polyclonal

Our highly specific primary antibodies and antigens are the reagents of choice for diagnostic companies. We test our products for diverse range of application e.g., ELISA, Western Blot, FACS and IHC.

❑ Lion Image in the inset is the logo of Make In India campaign

Salient features of YBL projects

- ✓ Fast track approach for feasibility, do-ability studies and further scale up, with our proprietary optimization protocols
- ✓ Cost-efficient & time bound
- ✓ Our products are robust and well characterized on various parameters and platforms
- ✓ Compliance with all government regulatory guidelines

MEDICA 2014: Meeting

It was a pleasure meeting our existing as well as new customers at Medica, 2014. We look forward to new cooperations during the next year.

Merry Christmas*****

YBL, R & D team celebrated Christmas; all members mutually exchanged the santa gifts among each other and shared the stories of Jesus Christ. Wish you all a Merry Christmas and a Happy New Year

Send us an e-mail with an inquiry, comment or suggestions at

bharat@yashrajbio.com

For products information please visit us at <http://www.yashraj.com/>

