



**YASHRAJ**  
BIOTECHNOLOGY LTD.  
*a bio-quest for ever*



**Yashraj Biotechnology Newsletter**

**Inside the issue-**

- **Message from the promoter Directors**
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- **Our Products**
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**Mab against Novel Sialyltransferases**

In an elegant study, our R &D team performed the molecular cloning of ST3Gal-I (a Novel Sialyltransferases ) and raised specific monoclonal antibodies against it.

Our findings were published in The Biochemistry Research International entitled “Development of Monoclonal Antibodies against CMP-N-Acetylneuraminic-acetyl-beta-galactosamide-alpha- 2,3-sialyltransferase 1 (ST3Gal-I) Recombinant Protein Expressed in E. coli”

**Reference:**  
<http://www.hindawi.com/journals/bri/2015/767204/>

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Dear Readers,

Welcome to our first newsletter of 2016! It is indeed a moment of great pleasure to release the first issue of our Newsletter in 2016.

It has been an honor and a privilege for YBL to serve you. We take this opportunity to express our sincere gratitude to you for your continued support.

We are delighted to inform you that 2015 was a very successful and rewarding year for our company. We were able to meet our goals and expand our new business and scientific horizons in a big way.

It has been a rewarding experience working with you and may this New Year brings forth many such rewarding moments for us to share.

We believe it is your support that have been the key ingredients to our success. So this New Year we wish to thank you for all the cooperation and hope to continue the association forever.

We also hope that this New Year would further strengthen our bond of trust and respect.

Season's greetings and best wishes for a Happy New Year.

Thanking you

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



**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. (Fig-1)

**Route of Production:** Recombinant

**Human Troponin T: SDS PAGE**

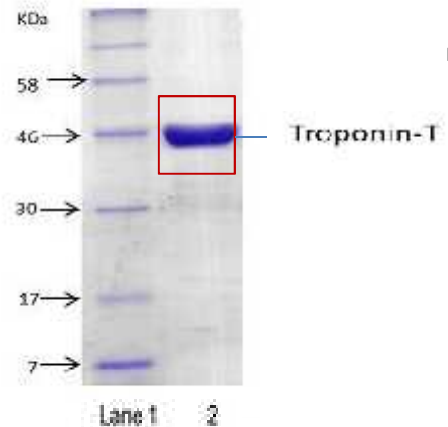


Fig-1

**r-NSE (FrNSE-51)**

Neuron specific enolase is an enzyme of glycolytic pathway. This enzyme is released in the cerebrospinal fluid (CSF) during neuronal injury. It is also a very useful biomarker for detection of neuroblastoma in the tumor patients.(Fig-2)

**Route of Production:** Recombinant

**12 % SDS PAGE Profile of r-NSE**

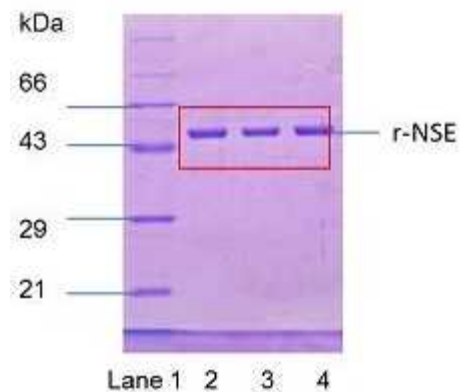


Fig-2

**r-Galectin - 3 (FrGTNH-49)**

Gelectin-3 is a member of lectin family. Galectin-3 binds to a wide range of extracellular matrix proteins such as fibronectin, and laminin domains. Expression of Galectin-3 is seen in neutrophils, macrophages, mast cells, fibroblasts, and osteoclasts Plasma. Galectin-3 is a novel prognostic marker in patients with chronic heart failure. (Fig-3)

**Route of Production:** Recombinant

**12 % SDS PAGE Profile of r-Galectine-3**

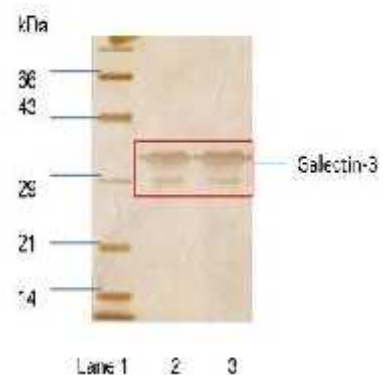


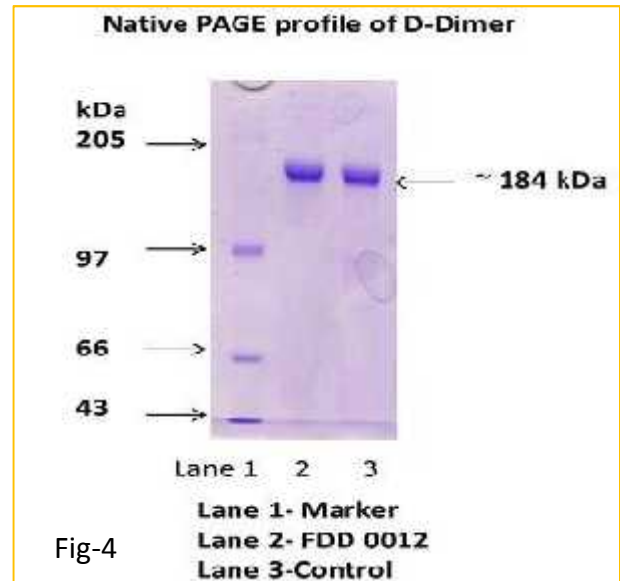
Fig-3



### D-Dimer (FDDp-36)

D-dimer is a degradation product of fibrin. It is considered as a prognostic marker for the thrombotic disorders. D-dimer testing is also used for the evaluation of suspected patients of deep venous thrombosis. On native page observed molecular weight of D-dimer is 184 kDa. ( Fig-4)

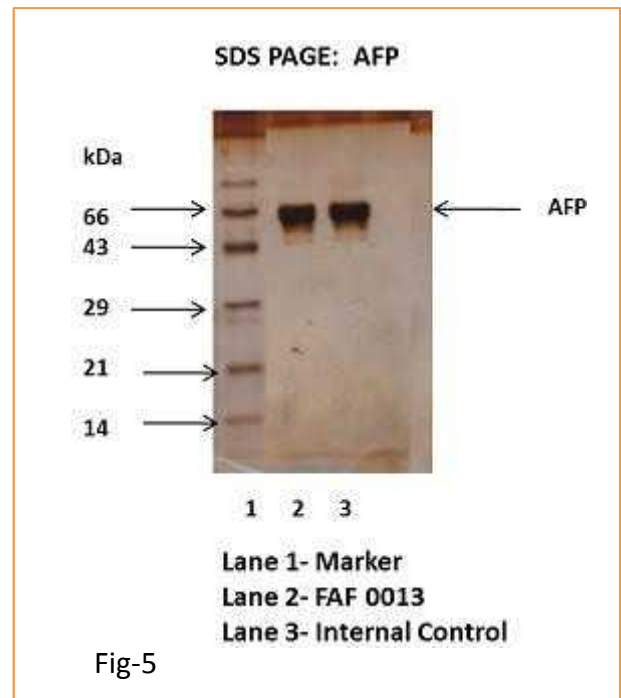
**Route of Production:** Native



### AFP (Catalog No -FAFhp-3)

Alpha fetoprotein (AFP) is a protein usually produced by the liver and yolk sac of a developing foetus during pregnancy. AFP is currently being used as gold standard diagnostic biomarker for the Hepatocellular carcinoma (HCC). Elevated level of AFP level correlates with the presence of HCC. ( Fig-5)

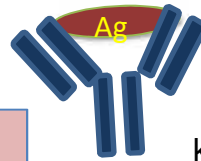
**Route of Production:** Native



### From Page No. 1.....

In our study we performed molecular cloning of ST3Gal- and further characterization was done on immunohistochemistry and immunoblotting; our data suggest that the antibodies are specific in nature. Our studies opens up new avenues for application of ST3Gal-I and its antibodies as diagnostic tool for breast cancer diagnosis along with existing biomarkers.





### CA 19-9 Monoclonal antibodies

YBL cell culture unit has successfully generated mouse monoclonal antibodies against the CA 19-9. Cancer antigen 19-9 (CA 19-9) is associated with gastrointestinal cancer. Elevated level of CA 19-9 has been reported in various other complications such as a colorectal cancer, esophageal cancer and hepatocellular carcinoma. CA 19-9 is the most widely studied and validated serum biomarker for the diagnosis of pancreatic cancer. CA 19-9 serum levels can provide important information with regards to prognosis and overall survival. (Fig-6)

### WB: CA 19-9 Mab

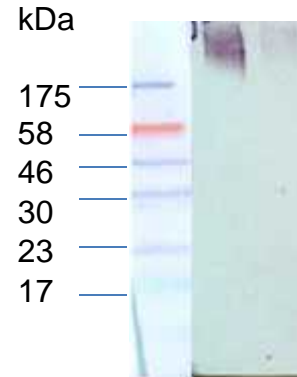


Fig-6

Lane 1    2    3

Lane 1: Marker

Lane 2: 1 KU of CA 19-9 Ag, Reduced

Lane 3: 1 KU of CA 19-9 Ag, Unreduced

### HbA1c Monoclonal antibodies

Our R &D team has generated a new clone of monoclonal antibodies against the HbA1c. Our antibodies specifically recognize glycated valine in the synthetic peptide comprise of N terminal sequence of hemoglobin  $\beta$  chain. (Fig-7). Further, we are in process of generating the various clones of HbA1C.

### WB: HbA1c Mab

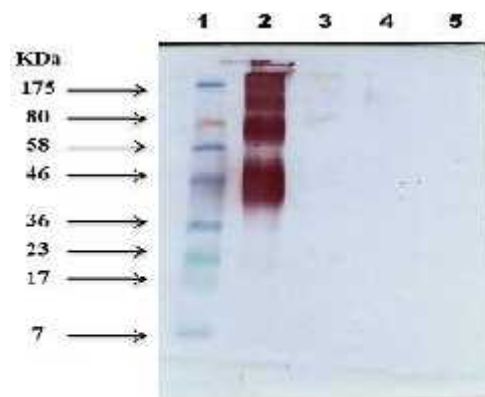


Fig-7

Lane 1 – MW ladder  
Lane 2 – HbA1c-HSA  
Lane 3 – HbA1c-BSA  
Lane 4 – NHS  
Lane 5 – BSA

### HbA1c Test

The popular HbA1c test shows the average level of blood glucose over the past 3 months. HbA1c is considered to be a prognostic marker for the diabetes mellitus. Higher amounts of glycated hemoglobin in the blood are associated with cardiovascular disease and retinopathy.



## YBL-Top Cardiac/CVD Markers

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

## Bulk order &amp; New Product development

YBL is your trusted partner for supply of high quality Antigens and Antibodies of batch-to-batch consistency with shortest possible lead time, We have capabilities for customizing the products as per your specifications, such as buffer, COAs, packaging and logistics. Besides the products which we regularly make, we can also develop new products for you with short turn-around time.

## CACLP-2016: Meet Us

We are hoping for your presence in CACLP-2016 China!. Please visit us in CACLP Expo at Xi' an, China from 7th to 9th March, 2016 at Booth No. B155 & B156.

Our R &D team would be happy to answer your queries and discuss potential projects. For appointments please write Email to-

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

