Technical Seminar

Date：April 26, 16:00 – 17:00
Place：A7F RIKEN CDB Conference Room

Massive Real-time qPCR & Single Cell PCR with Fluidigm's Microfluidics

Fluidigm : Integrated Fluidic Circuits

Marc Unger (Fluidigm Corporation)

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Fluidigm Corporation developed a microfluidic chip technology, opening the way for wide ranging practicable applications, more to offer than just miniaturization. The Fluidigm chip includes unique *integrated fluid circuit* (IFC) ,essential for developing practical applications. The IFCs consist of valves, pumps and various other elements, in addition to microchannels with muiti-layer structure. It enables complex and massively parallel bioprocesses, detection and quantification of trace targets.

＜TOPICS＞

- **Massive Real-Time qPCR at nano-liter scale of reaction volume**
- **Gene Expression transcript makers at single cell level**
- **Abl-tyrosine kinase domain mutation detection in chronic myeloid leukemia**

etc.

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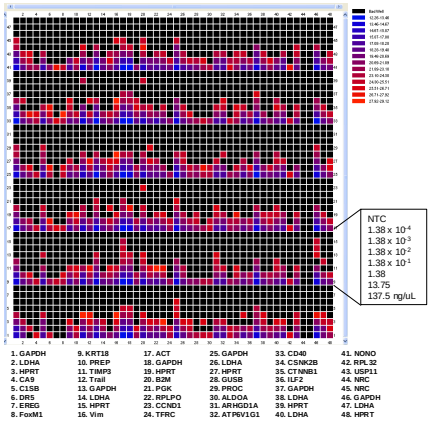
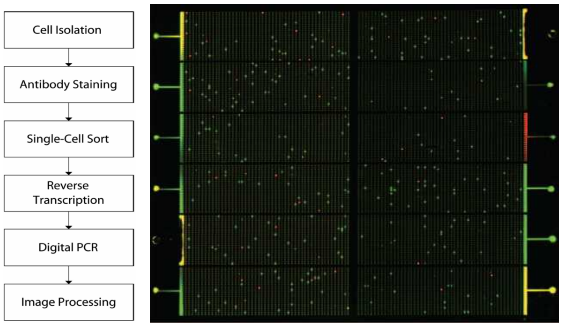
Real Time qPCR result from many genes



Heat map representing Ct values from real time qPCR with Dynamic array.
10 fold cDNA dilution covering 7 orders of magnitude, with 6 replicates (horizontal rows on the chip)
33 assay each run once, including 3 house keeping genes each run six times and one no reagent control.

Gene expression detection from stem cell at single cell level



Digital PCR Image with digital array
Green：GAPDH
Red：PU1
Each signal comes from one molecule of target gene.

Planning Section, RIKEN CDB
Tel: 078-306-3009 (ext. 1136)
E-mail: cdb-mtg@cdb.riken.jp

Fluidigm K.K.
E-mail : biomarkasia@fluidigm.com

Tokyo Head Office:
Level 5, Ginza TK Building
1-1-7 Shintomi, Chuo-ku, Tokyo 104-0041
Tel:03-3555-2351 FAX:03-3555-2353
Takashi Fukushima

Osaka Office:
Level3-123,Soukendoshomachi Building
2-1-10 Doshomachi, Chuo-ku,Osaka 541-0045
Tel:06-6220-0500 Fax:06-6220-0660
Seishi Matsumoto