# Certification of Cell Line (STR)

Recently, many cross contaminations are rising in the human cell lines. Therefore, the certification of the cell line used in the laboratory is expected to be essential for the trustful result of the research. The case is increasing that the certification of the cell line is recommended or required in the submission of paper year by year.

STR Analysis is spotlighted as the easiest method to certificate the cell lines. BEX provides two services of the cell line certification; Cell ID<sub>™</sub> System (10 Locus) as a global standard used in the national cell banks all over the world, and PowerPlex®16 System (16 Locus) suitable for the confirmation of the genotype of iPS Cell (induced pluripotent Stem Cell) and ES Cell (Embryonic Stem Cell).

### **Product Lineup**

	Price	Delivery
Certification of Cell Line 10 Locus(STR)	¥18,000/ Sample	>1 week
Certification of Cell Line 16 Locus(STR)	¥25,000/ Sample	>1 week

\* An additional fee to analyze DNA for the marker in the case of certification of unregistered cells in the cell bank.

#### **Delivery Product**

•Peak Size Observed (Excel)

•allele Data (Excel)

•Spectra Data File (PDF)

#### Information

•Allele matrix values may not be discriminated according to the observed peaks.

- •The data in this analysis service should be used only for the research.
- Although the examinations are conducted very carefully, BEX has no responsibility along with the results.
- •The sample is adequately discarded under the strict security, law, regulations, and rules.
- $\ensuremath{\cdot}\xspace$  The delivery date depends on the operation.
- •The freight of the sample to BEX is payable.

I. Please send your requests to us.	Please email or send the order form downloaded from BEX web page E-mail : info@bexnet.co.jp FAX : +81-3-5375-5636
II. Please send the sample and order form to us.	•DNA Sample > 20ng Purity: 260nm/280nm=1.8 (recommendation)     •Order form     Chilled or Frozen  Address: 〒173-0004 4F 61-15 2-Chome Itabashi-ku Itabashi, Tokyo BEX CO., LTD. TEL: +81-3-5375-1071

# **DNA** Sequencing

Next-day reports of the sequence data and spectra data (PDF or AB1 file type) by Email.

#### **Product Lineup**

#### **DNA** Sequencing

	Price	Avg. Analyzed Length	Delivery
Reaction + Analysis *1	¥3,500/1run	600bp~800bp	> 1 Business Day
preMix *2	¥12,800/8run (¥1,600/1run)	600bp~800bp	>1 Business Day
Analysis *3	¥1,000/1run	600bp~800bp	> 1 Business Day
Analysis *3 plate ( >= 96run)	¥500/1run	600bp~800bp	> 4 Business Day

\*1 The fee turns to be ¥2,500 / run in the case that the number of unanalyzed bases is more than that of BEX QC Standard bases.

\*2 Please send 8-strip tube with the mix of templates and primers. Even if the number of the samples are not up to the eight units, the fee for 8-run units (¥1.600/run) should be payable.

\*3 The samples reacted to ABI BigDye® v1.1 or v3.1 are acceptable in the service of Analysis. The samples should be reacted, purified, and dried up.

#### Option

	Price
PCR Product Purification (Single Bands Only Acceptable)	¥1,000/ Sample
Email with Spectra Data PDF File and AB1 File	¥1,000/ Order
CD-R Shipment with Spectra Data PDF File and AB1 File	¥2,000/ Order
Shipment of the Document of Spectra Data	¥1,000/ Order

#### **Delivery Product**

•Sequence Data (Text File) •Spectra Data File Either PDF or AB1

#### Information

•Next-day reports require the arrival of the samples by noon. (Except Saturday, Sunday, Holidays)

•Free reanalysis is conducted in the conditions listed below in DNA Sequencing service.

I) Analysis expected in another condition II) The spectra are unclear because the analysis equipment doesn't work.

\*\* I) requires the service of "Reaction + Analysis"

•The sample is adequately discarded under the strict security, law, regulations, and rules.

 $\ensuremath{\cdot}\xspace{\ensuremath{\mathsf{The}}\xspace}$  freight of the sample to BEX is payable.

## Flow to Order

I. Please send your requests to us.	Please email or send the order form downloaded from BEX web page E-mail : info@bexnet.co.jp   FAX : +81-3-5375-5636	
II. Please send the sample and order form to us.	Sample for each product line Order form Address: 〒173-0004 4F 61-15 2-Chome Itabashi-ku Itabashi, Tokyo BEX CO., LTD. TEL: +81-3-5375-1071	

#### Reaction + Analysis

Case1: Purified Plasmid DNATotal < 7kbp···· > 700ngTotal > 7kbp···· > 1 $\mu$ g( > 50ng/ $\mu$ L)	Case2: PCR Product Purified · · · > 100ng ✔ Unpurified · · · PCR Solution 50 µ L * Additional fee for unpurified	&	<b>Primer</b> <ul> <li>&gt; 10pmol / run (10 μ M)</li> <li>* Universal Primer is Free in Reaction + Analysis</li> </ul>
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#### preMix

requires 8-strip tube units with the mix of the template and primers.



\*1 Total solution should be 14  $\mu$  L / run in DDW.

\*2 The sample numbers are labeled in the 8-strip tube.

\*3 An additional fee is ¥1,000 / tube for the universal primer.

#### Analysis

ABI BigDye® v1.1 or v3.1 reacted samples only acceptable The sample should be reacted, purified, and dried up.

#### Universal Primer

Primer	Sequence $5' \rightarrow 3'$	Primer	Sequence 5' $\rightarrow$ 3'
M13 F-1	GTAAAACGACGGCCAG	SP6	ATTTAGGTGACACTATAG
M13 F-2	GTTTTCCCAGTCACGAC	10F	GTTTGATCCTGGCTCA
M13 R	GGAAACAGCTATGACCATG	800R	TACCAGGGTATCTAATCC
Т7	AATACGACTCACTATAGG	ITS1F	GTAACAAGGT(T/C)TCCGT
Т3	AATTAACCCTCACTAAAGG	ITS1R	CGTTCTTCATCGATG

# Primer Walking

Quick and accurate sequencing long gene.

## **Product Lineup**

	Price
Single Strand Analysis (Incl. Primers)	¥20/bp
Double Strand Analysis (Incl. Primers)	¥35/bp

#### **Delivery Date**

Our staff contacts you after the order.

#### **Delivery Product**

- •Single Strand Sequence (Text File)
- •Spectra Data File (PDF and AB1 File)
- $\mbox{-} Sequence obtained with each primers (Text File)$
- Synthesized Primers

#### Information

- •The actual fee is payable in the unavoidable termination after the discussion with the customers.
- $\ensuremath{\cdot}$  The sample is adequately discarded under the strict security, law, regulations, and rules.
- •The delivery date depends on the operation.
- •The freight of the sample to BEX is payable.

I. Please send your requests to us.	Please email or send the order form downloaded from BEX web page with the text file of known sequence data. E-mail : info@bexnet.co.jp FAX : +81-3-5375-5636	
	<ul> <li>Purified Plasmid DNA [Expected Analysis Size(bp)÷500×0.5] μg</li> <li>Order form</li> </ul>	
II. Please send the sample and order form to us.	Address: 〒173-0004 4F 61-15 2-Chome Itabashi-ku Itabashi, Tokyo BEX CO., LTD. TEL: +81-3-5375-1071	

## Microbe Detection by Sequencing

Microbe DNA is analyzed under Rapid Identification of Microorganisms Based on Molecular Biological Method by Gene Analysis following Japanese Pharmacopeia. Sequencing is conducted after PCR amplification of a part of highly variable domain in the 16S rRNA for bacteria, and of the internal transcribed spacer1 (ITS1) region, located between 18S rRNA and 5.8S rRNA for fungi.

### Product Lineup

		Price	Delivery
Bacteria or fungi	DNA Extraction $\sim$ PCR $\sim$	¥15,000/ Sample	>1 week
Unclear *	Sequencing~BLAST Search	¥20,000/ Sample	>1 week

 $\ast$  Analysis in the case that whether the sample is bacteria or fungi is unclear.

### **Delivery Product**

- •Spectra Data (PDF)
- •Sequence Data (Text File)
- •Result of BLAST Search (The most concordant top 10 Microbe Names to Registered Sequence)
- Operation Report

#### Information

- •The sample isolation are not acceptable. The isolated strains are only accepted.
- •The possibly-pathogenic strains are not acceptable.
- •2 PCRs including DNA extraction are conducted for maximum.
- •The fee turns to be half of the ordinary price. In the case that the number of unanalyzed bases is more than that of BEX QC Standard bases even if the clear spectra are not obtained after two sequencings.
- •Detection of microbial species are not acceptable. The customer should detect the species by the results of BLAST research.
- •The sample is adequately discarded under the strict security, law, regulations, and rules.
- •The delivery date depends on the operation.
- •The freight of the sample to BEX is payable.

#### Flow to Order

I. Please send your requests to us.	Please email or send the order form downloaded from BEX web page with the text file of known sequence data. E-mail : info@bexnet.co.jp FAX : +81-3-5375-5636
II. Please send the sample and order form to us.	<ul> <li>Agar media with the isolated strain. Chilled</li> <li>Oder form</li> <li>Address: 〒173-0004 4F 61-15 2-Chome Itabashi-ku Itabashi, Tokyo BEX CO., LTD. TEL: +81-3-5375-1071</li> </ul>

#### Reference

The Japanese Pharmacopoeia 15th edition

Rapid Identification of Microorganisms Based on Molecular Biological Method pp1741-1742 (March 31, 2006 The MHLW Ministerial Notification No.285)

# Sequence Detection by Straight Walk®

This is the sequence detection service by Straight Walk® kit. An unknown region is cloned from the sample ten times as a large genome size as human. The adaptor is added to the gene after the restriction enzyme treatment. PCR is conducted with the primer designated for the known sequence. It is possible to subclone to various vectors by adding suitable restriction enzyme sites to known primers because the sequence of the primer includes the cutting site for *Not* I.

### **Product Lineup**

	価格	納期
One-tailed Cloning	¥80,000	> 3 week
Two-tailed Cloning	¥150,000	> 4 week

\* 9 kinds of restriction enzymes (max) are used for analysis.

#### Delivery Product

- •Unknown Sequence (Text File)
- Operation Report

#### Information

- •The actual fee is payable in the unavoidable termination after the discussion with the customers.
- •The sample is adequately discarded under the strict security, law, regulations, and rules.
- $\ensuremath{\cdot}\xspace$  The delivery date depends on the operation.
- •The freight of the sample to BEX is payable.

### Flow to Order

I. Please send your requests to us.	Please email or send the order form downloaded from BEX web page with the text file of known sequence data. E-mail : info@bexnet.co.jp FAX : +81-3-5375-5636
	<ul> <li>Genome DNA &gt; 2 μ g Chilled or Frozen</li> <li>Order form</li> </ul>
II. Please send the sample and order form to us.	Address: 〒173-0004 4F 61-15 2-Chome Itabashi-ku Itabashi, Tokyo BEX CO., LTD. TEL: +81-3-5375-1071

#### Reference

Tokuji Tsuchiya, Nanako Kameya, Ikuo Nakamura Straight Walk: A modified method of ligation-mediated genome walking for plant species with large genome Analytical Biochemistry 388(2009)158-160

## Genotyping

#### **Product Lineup**

		Price	
		Setup Fee	Analysis Fee
RAPD	From PCR	¥10,000	¥600/ Sample
STR(SSR)	From PCR	¥12,000	¥4,000/ Sample
	Only Analysis	¥12,000	¥1,500/ Sample
T-RFLP	From PCR	¥12,000	¥5,000/ Sample
	Only Analysis	¥12,000	¥1,500/ Sample

\* In RAPD, productivity is checked by 2 PCRs and 2 electrophoreses (non-fluorescence) per 1 sample.

\* In STR, T-RFLP, the fragment analysis is conducted with the fluorescence primers.

\* The additional fee for the primers from PCR.

\* In T-RFLP, the analysis from the restriction enzyme treatment is acceptable.

#### **Delivery Date**

Our staff contacts you after the order.

#### **Delivery Product**

#### RAPD

• The photos of Electrophoresis

#### STR, T-RFLP

- ·Valuable Data (Excel)
- •Spectra Data (PDF)

#### Information

• The fee turns to be half of the ordinary price of the analysis fee in the case that the results of the fragment analysis are not obtained. • The sample is adequately discarded under the strict security, law, regulations, and rules.

•The delivery date depends on the operation.

•The freight of the sample to BEX is payable.

I. Please send your requests to us.	Please email or send the order form downloaded from BEX web page. E-mail : info@bexnet.co.jp FAX : +81-3-5375-5636
II. Please send the sample and order form to us.	Genome DNA Chilled or Frozen     Order form     Address: 〒173-0004 4F 61-15 2-Chome Itabashi-ku Itabashi, Tokyo
	BEX CO., LTD. TEL: +81-3-5375-1071



# SNP Typing

### **Product Lineup**

Ready-made SNP Typing Order of the gene listed in optimized SNP Customized SNP Typing Order of the gene not listed in optimized SNP

	Price		Price
DNA Extraction (Mouse swab, hair root, tissue, etc.)	¥3,000~/Sample	DNA Extraction (Mouse swab, hair root, tissue, etc.)	¥3,000∼∕ Sample
SNP Typing Setup Fee	¥5,000∕ order	SNP Typing Setup Fee	Please ask
SNP Typing Analysis Fee	¥1,500/ Sample•1SNP	SNP Typing Analysis Fee	¥1,500/ Sample•1SNP

\* SNP after optimization is added to optimized SNP list. The SNP typing is applied to the ready-made SNP Typing price in the next order.

#### Optimized SNP List (Partial)

Gene	Polymorphism Site	refSNP ID
ADRB3 (adrenergic, beta-3-, receptor)	Trp34Arg	rs4994
ADRB2 (adrenergic, beta-2-, receptor, suface)	Arg16Gly	rs1042713
UCP1 (uncoupling protein 1)	A-3826G	rs1800592
ALDH2 (aldehyde dehydrogenase 2 family)	G1543A(Glu487Lys)	rs671
CYP1A1(cytochrome P450, family 1, subfamily A, polypeptide 1)	lle462Val	rs1048943
CYP1A1(cytochrome P450, family 1, subfamily A, polypeptide 1)	Msp1	rs4646903
AGT (angiotensinogen (serpin peptidase inhibitor, clade A, member 8))	Met235Thr	rs699
MTHFR(5,10-methylenetetrahydrofolate reductase (NADPH))	C677T	rs1801133

\* Optimized list is always updated in our web page.

#### **Delivery Product**

#### •Operation Report

#### Information

- ·Optimization may be difficult according to the sequence around SNP.
- The fee turns to be half of the ordinary price of the analysis fee in the case that the results of the fragment analysis are not obtained.
- •The sample is adequately discarded under the strict security, law, regulations, and rules.
- ${\boldsymbol{\cdot}} The delivery date depends on the operation.$
- •The freight of the sample to BEX is payable.

I. Please send your requests to us.	Please email or send the order form downloaded from BEX web page. E-mail : info@bexnet.co.jp FAX : +81-3-5375-5636
II. Please send the sample and order form to us.	<ul> <li>Genome DNA Chilled or Frozen</li> <li>Order form</li> <li>Address: 〒173-0004 4F 61-15 2-Chome Itabashi-ku Itabashi, Tokyo BEX CO., LTD. TEL: +81-3-5375-1071</li> </ul>