溯远基因
SUPERYEARS

China First and Original Sanger Sequencer Approved by NMPA

Honor Series Genetic Analyzer by Superyears Gene

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Superyears Honor Series are developed upon Sanger Method, which could support both 6-dye and 8-dye fluorescence , and can be applied to gene sequencing and fragment analysis, therefore, it could attend the needs of basic research and clinical laboratory use. The Honor series genetic analyzer is composed of capillary electrophoresis host, computer, matching consumables materials and reagents, as well as self-developed data acquisition and data analysis software. The data acquisition software provides a customizable operation interface, which can reflect running status of the instrument , the usage status of consumables materials and systematic maintenance in real time; The data analysis software consists of sequencing analysis software and fragment analysis software. The sequencing analysis software can be used for basecalling, sequencing data quality evaluation, mutation spot search, automatic deletion of low-quality data and other functions; The fragment analysis software can be used to analyze STR, SNP, AFLP, Fusion, Rearrangement, etc.

Open System
Independent Intellectual Property
World Leading 8-dye Technology

Product Advantages

- Based upon Sanger Method, holding the golden standard in Sequencing industry;
- Support up to 8-dye fluorescence, single detection for more sites;
- High resolution, High repeatability and outstanding sequencing quality;
- Completely open detection platform, compatible with commercial kits in the market;
- Language interface customizable, free charge of software upgrading;
- High-cost performance, saving 50%+ of cost in consumables materials and reagents;
- Double certificated by NMPA and CE, ensuring the clinical compliance;

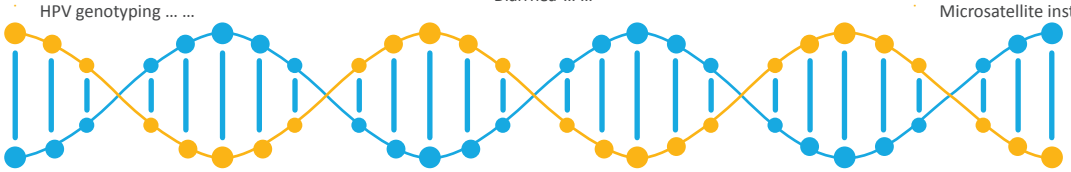
Application Scenarios

- Medical Treatment and Public Health: reprogenetics, cancer medication, pathogen typing, drug research and development, etc.;
- Public Safety: Juridical expertise, criminal investigation, food safety, etc.;
- Scientific research and others: environmental detection, biological protection and biological bredding, etc.
- Application of Gene Analyzer in Molecular Clinical Diagnosis

Reproductive health
- Trisomy 21 and sex chromosome polyploidy
- Y chromosome microdeletion
- Folate metabolism
- Fragile X syndrome
- HPV genotyping … …

Infectious Disease
- Accurate use of infectious diseases (hepatitis B, hepatitis C, Tuberculosis, HIV)
- Respiratory tract infection
- Diarrhea … …

Tumor
- Tumor targeting Medicine (EGFR, KRAS, BRAF, C-KIT, ALK, ROS1, NRAS, PDGFRA, PIK3CA, P53, BRCA1/2, …)
- Chemotherapy Medicine (UGT1A1, DPD, 5-Fu Medication, platinum Medication Guidance)
- Microsatellite instability (MSI) … …



Hereditary Disease
- Neonatal jaundice (UGT1A1)
- Hereditary genetic deafness
- Dravet syndrome (SCN1A)
- HLA typing … …

Blood Disease
- Classification, auxiliary diagnosis and treatment of blood diseases, treatment planning / reference, prognosis evaluation (AML, ALL, CLL, CML, MPN, MDS…) … …

Cardio Cerebrovascular
- Alcohol metabolism / nitroglycerin efficacy (ALDH2)
- Medication guidance (clopidogrel, warfarin) (CYP2C9 / VKORC1) … …

Product Parameters

Basic Parameters

- **Dimensions:** Hatch closure: 610mm×532mm×812mm (L×W×H)
  Fully open: 1225mm×532mm×812mm
- **Weight:** About 95 kg
- **Channel:** 16
- **Fluorochrome No.:** 6/8
- **Capillary Length:** 36 cm、50 cm
- **Sample Handling:** Automatic, 96 orifice plate
- **Injection Method:** Automatic
- **Laser:** Semiconductor Solid
- **Wavelength of laser source:** 505 nm
- **Wavelength of fluorescent dye:** 500 -700 nm

Performance

- **Temp.** Accuracy: ΔT≤0.2℃
- **Resolution:** ≤0.15 bp
- **Read length:** Above 800 bp

Work Environment

- **Power supply:** 220 VAC±10%, 50 Hz；single phase：10 A, 2200 VA
- **Ambient Temp.:** 20℃～30℃, the temp. fluctuation would not be more than ±2℃ during operation period
- **Relative Humidity:** 20%-80% (non condensing)
- **Atmospheric pressure:** 86 kPa~106 kPa

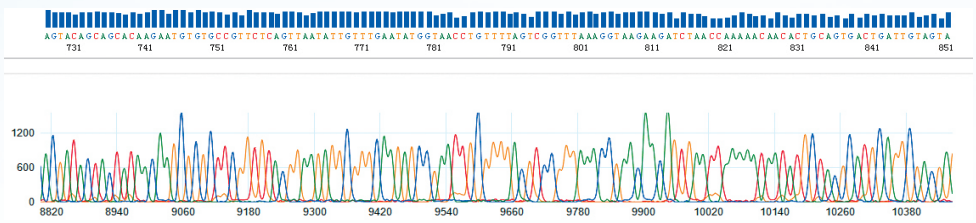
Product Performance

Gene Sequencing Flux and Performance Index					
Operation Mode	Flux		Consumables		Performance
	Average operating time (min)	Maximum flux(sample/day)	Capillary length (cm)	Glue Type	Continuous reading length (CRL)
Sequence36_SY07	35	656	36	SY07	500 bp
Sequence50_SY07	120	192	50	SY07	850 bp
Fastseq50_SY07	60	384	50	SY07	700 bp

Fragment Analysis Flux and Performance Index									
Operating mode	Flux		Consumable		Performance				
					General Performance		Accuracy of fragment size analysis (Standard deviation)		
	Average operation (min)	Maximum flux (Sample/day)	Capillary length (cm)	Glue type	Resolution range	Longest fragment analysable	50-400 bp	401-640 bp	640-1200 bp
GeneScan36_SY04	50	448	36	SY04	40-640bp	640bp	<0.15	<0.3	N/A
GeneScan36_SY07	35	656	36	SY07	40-640bp	640bp	<0.15	<0.3	N/A
GeneScan50_SY07	45	512	50	SY07	40-640bp	640bp	<0.15	<0.3	N/A
GeneScan50_SY07Long	125	176	50	SY07	40-1200bp	1200bp	<0.15	<0.3	<0.35

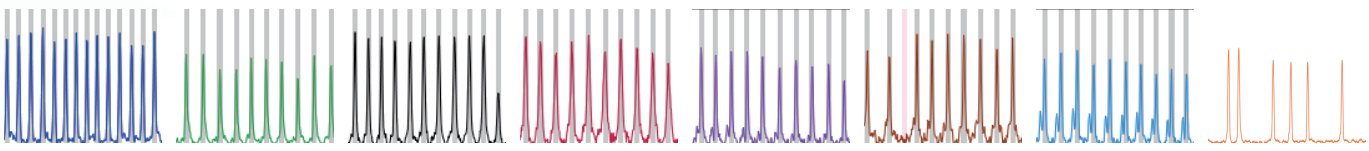
Application Cases

Sequencing Analysis



In standard sequencing mode, using BigDye terminator v3.1 for sequencing analysis. From the waveform data, we can note that the base-pair still has high separation capability and QV value above 850 bp.

Fragment Analysis



The Superyears Honor Series can support up to 8-dye fluorescence, combining its self-produced Y62 Plex STR Detection Kit, it's capable of constructing the database of autosomal plus Y chromosome simultaneously through one single reaction.

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