



About Axbio >>>

Axbio is a semiconductor-biotechnology company, developing cutting-edge technologies including nanopore sequencing, Bio-CMOS chips, and electrochemistry sensors. Its sequencing and molecular diagnostics products are suitable for academia and industry users, serving large research laboratories as well as small clinics.



Axbio Inc.

📍 3350 Scott Blvd # B-9, Santa Clara, CA 95054, U.S.A.

☎ +1(408)642-1287

🌐 www.axbio.com

✉ info@axbio.co

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AxiLona EL-100 Microarray Platform

- Multiplex DNA/RNA analysis
- Multiplex SNP analysis

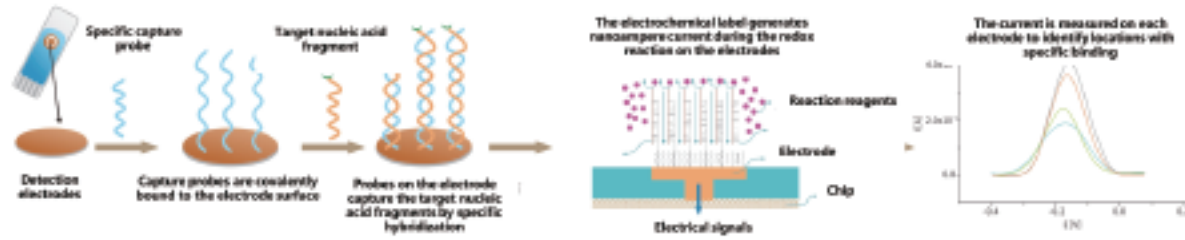
Open Detection Platform, Build Your Own Assay

- ✓ Low cost
- ✓ High sensitivity
- ✓ Fast hybridization and detection time
- ✓ Up to 8 samples analyzed on one chip

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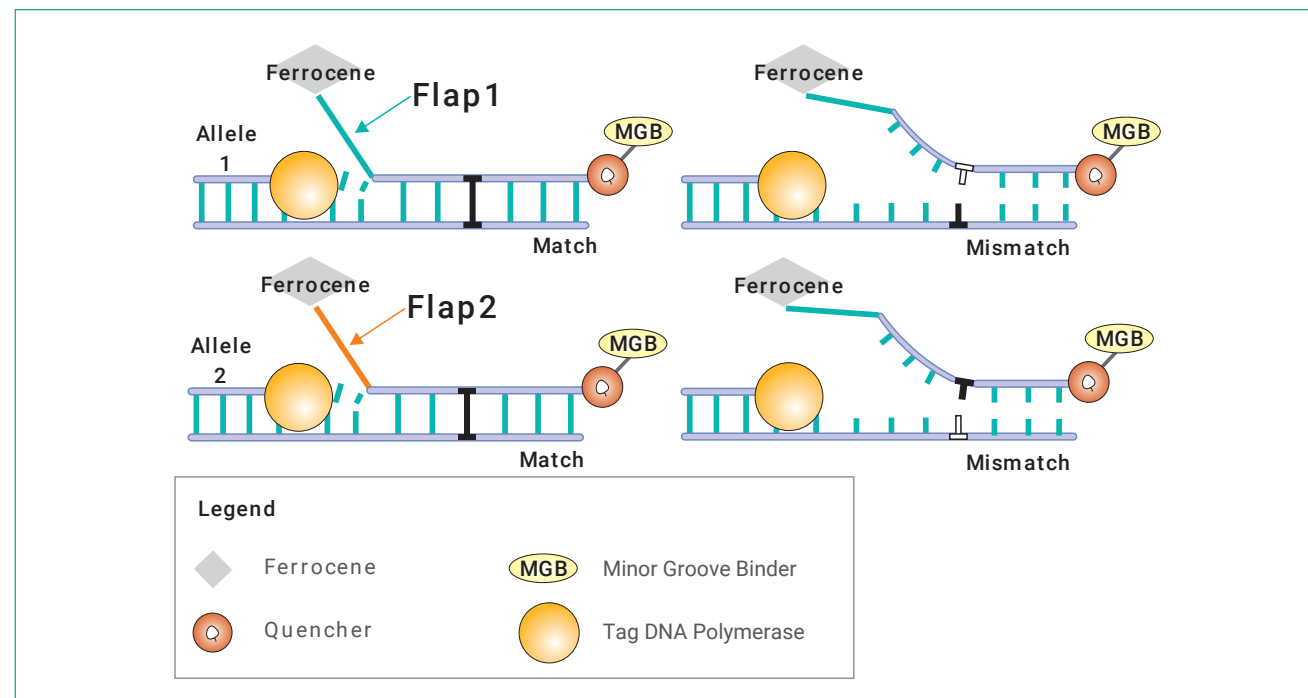
Detection principle >>>

Molecular POCT platform based on a microarray of universal nucleic acid probes attached to the surface of individual electrochemical sensors



SNP-specific PCR >>>

- TaqMan® - like assay design with one primer pair and two probes overlapping the SNP region and forming perfect match (PM) with corresponding SNP-allele.
- Unique 18-22 nt flaps with Ferrocene are added to the 5'-end of each probe during synthesis. Flaps are complementary to individual capture probes attached to the electrodes on the chip.
- During PCR, only the PM probe is annealed to the template strand, and the flap gets cleaved from this probe using 5' → 3' exonuclease activity of Taq polymerase.
- Once cleaved from the probe, flaps hybridize to capture probes on the electrodes.
- Electrochemical signal is then generated from the Ferrocenes attached to the flaps hybridized to the specific probes on the electrodes.



Product Advantages >>>

- 1 Multiplex detection: Up to 54 targets can be detected in one assay
- 2 Cost effective: Drastically reduces instrument and cartridge cost
- 3 Fast and efficient: Detection of assay targets in up to 15 minutes
- 4 Ease of use: Each workflow step is automated with minimal hands-on time
- 5 Light weight and compact: Well-suited for on-site and POC testing

Applications >>>



Infectious Diseases

Respiratory tract infections,
Genital/urinary tract infections,
Central nervous system infections,
Bloodstream infections



Food Safety/ Environmental Testing

Foodborne pathogens,
probiotics, AMR surveillance



Customs Inspection

Human, animal, and plant
pathogens



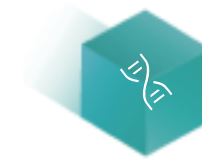
Agriculture/Livestock/ Aquaculture

Genetically modified crops,
pathogens, AMR genes



Protein Detection

Custom protein detection panels
for various applications



SNP Detection

Inherited diseases, pharmacog-
enomics and cancer diagnostics

Workflow >>>

Total turnaround time is <70 min



Easy-to-use Control System >>>

The system is designed for multiplex DNA analysis in clinical and POC settings

Traceability

- Full traceability of sample ID, cartridge ID, operator, run ID and run time

Automation

- Pre-loaded optimized protocols suitable for multiple Traceability assay types

Easy maintenance

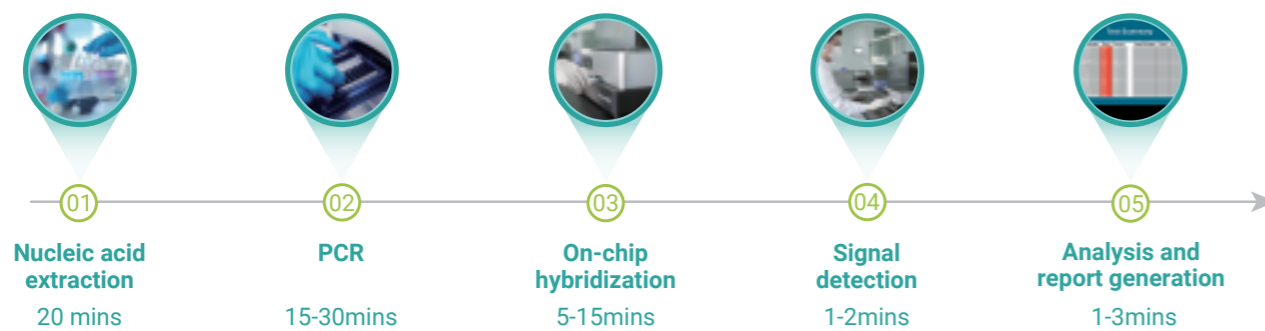
- Self-calibration
- Automated cleaning protocol

User Management

- Flexible configuration of user permissions to restrict access to test results and reports

Automated Report Generation

- Reports are generated in multiple formats compatible with LIMS systems



Nucleic acid probe array on a chip >>>

The chip provides low-cost scalable electrochemical detection platform for various analytes

- ✓ The chip with 54 individually addressable electrodes
- ✓ Small size: 40 mm X40 mm
- ✓ Flexible custom microfluidic configuration for up to 8 samples per chip
- ✓ High sensitivity: pM/mL detection limit for most targets



Key Specifications >>>

Parameters	Specification
Input sample volume	10 - 20µl
Number of unique detection targets	1-54
Operating temperature	10 - 50°C
Operating humidity	< 85%(RH)
Dimensions	360(L)×230(W)×140(H)
Weight	6.15 kg
Email notification	Optional

Ordering info >>>

Classification	Product	Cat. No.
DNA test	AxiLona EL-100 Microarray DNA analyzer	EL-00100
	AxiLona EL-100 Flu/Covid-19 Panel	Z010001
	AxiLona EL-100 Viral Respiratory Panel	Z030001
	AxiLona EL-100 Comprehensive Respiratory Panel	Z040001
SNP test	AxiLona EL-100 Microarray DNA analyzer	EL-00100
	AxiLona EL-100 High Altitude Adaptability Panel	S010001
	AxiLona EL-100 KRAS Cancer Risk Assessment Panel v.1	S020001

AxiLona EL-100 test Panels - DNA >>>

01

AxiLona EL-100 Flu/Covid-19 Panel

4 Targets in One Test

Cat.No. Z010001



Panel contents

Pathogen type	Target pathogen
Virus	Influenza A
	Influenza B
	SARS-CoV-2
	RSV

Panel details

Feature	Specification
Regulatory status	For Research Use Only
Indication	Upper respiratory tract infection
No. of targets	4 respiratory viruses plus 1 internal control
Format	Microarray
Kit size	24 tests/8-pack
Throughput	3 tests/chip
Compatible instrument	AxiLona EL-100
Control(s)	Positive control, negative control, internal control
Sample type(s)	Oral or nasal swab
Turnaround time	2 hours
Cat.No.	Z010001

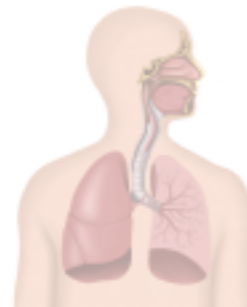
AxiLona EL-100 test Panels - DNA >>>

02

AxiLona EL-100 Viral Respiratory Panel

16 Targets in One Test

Cat.No. Z030001



Panel contents

Pathogen type	Target pathogen
Virus	Influenza A
	Influenza B
	SARS-CoV-2
	Coronavirus OC43
	Coronavirus 229E
	Coronavirus HKU1
	Coronavirus NL63
	Respiratory Syncytial Virus A (RSVA)
	Respiratory Syncytial Virus B (RSVB)
	Human Metapneumovirus
	Human Bocavirus(HBoV)
	Human adenovirus(HAdV)
	Parainfluenza virus 1
	Parainfluenza virus 2
	Parainfluenza virus 3
	Parainfluenza virus 4

Panel details

Feature	Specification
Regulatory status	For Research Use Only
Indication	Upper respiratory tract infection
No. of targets	16 respiratory viruses plus 1 internal control
Format	Microarray chip
Kit size	24 tests/8-pack
Throughput	1 test/chip
Compatible instrument	AxiLona EL-100
Control(s)	Positive control, negative control, internal control
Sample type(s)	Oral or nasal swab
Turnaround time	2 hours
Cat.No.	Z030001

AxiLona EL-100 test Panels - DNA >>>

03

AxiLona EL-100 Comprehensive Respiratory Panel

40 Targets in One Test

Cat.No. Z040001



Panel contents

Virus (28)		Bacteria (12)
Adenovirus	Influenza A Subtype H1	Mycoplasma pneumoniae
Coronavirus OC43	Influenza A H1N1	Chlamydia pneumoniae
Coronavirus 229E	Influenza A Subtype H3	Coxiella burnetii
Coronavirus HKU1	Influenza A Subtype H5	Bordetella holmesii
Coronavirus NL63	Influenza A Subtype H7	Bordetella pertussis
SARS-CoV	Influenza B	Bordetella parapertussis
MERS-CoV	Parainfluenza virus 1	Legionella pneumophila
SARS-CoV-2	Parainfluenza virus 2	Klebsiella pneumoniae
Varicella-zoster virus	Parainfluenza virus 3	Staphylococcus aureus
Epstein-Barr virus	Parainfluenza virus 4	Haemophilus influenzae
Cytomegalovirus	Respiratory syncytial virus (A/B)	Streptococcus pneumoniae
Human herpes virus 6	Rhinovirus	Moraxella catarrhalis
Human Bocavirus	Enterovirus EV71	
Human Metapneumovirus	Enterovirus D68	

Panel details

Feature	Specification
Regulatory status	For Research Use Only
Indication	Upper respiratory tract infection
No. of targets	40 respiratory viruses plus 1 internal control
Format	Microarray chip
Kit size	24 tests/8-pack
Throughput	1 test/chip
Compatible instrument	AxiLona EL-100
Control(s)	Positive control, negative control, internal control
Sample type(s)	Oral or nasal swab
Turnaround time	2 hours
Cat.No.	Z040001

AxiLona EL-100 SNP test Panels - SNP >>>

01

AxiLona EL-100 High Altitude Adaptability Panel

24 SNPs in One Test

Cat.No. S010001



Panel contents

#	RSID	Allele AA	Allele BB	Allele AB
1	rs62139541	GG	AA	GA
2	rs62139542	GG	CC	GC
3	rs12613567	AA	GG	AG
4	rs13007887	TT	GG	TG
5	rs1947531	AA	GG	AG
6	rs2276555	AA	GG	AG
7	rs2346413	TT	AA	TA
8	rs6745531	CC	AA	CA
9	rs6719900	AA	TT	AT
10	rs6749107	GG	AA	GA

Panel details

Feature	Specification
Regulatory status	For Research Use Only
Indication	High Altitude Adaptability
No. of targets	24 SNP (12 genetic loci)
Format	Microarray
Kit size	24 tests/8-pack
Throughput	1 test/chip
Compatible instrument	AxiLona EL-100
Control(s)	Internal control
Sample type(s)	Buccal swab
Turnaround time	2 hours
Cat.No.	S010001

AxiLona EL-100 SNP test Panels - SNP >>>

02

AxiLona EL-100 KRAS Cancer Risk Assessment Panel v.1

19 loci of KRAS gene in One Test

Cat.No. S020001



Panel contents

#	RSID	WT allele	Type	Classification	Increased cancer risk
1	rs104894359	C	Missense	pathogenic	Lung
2	rs104894360	T	Missense	pathogenic	AML
3	rs104894365	C	Missense	pathogenic	Endometrial
4	rs104894366	G	Missense	likely-pathogenic	Pancreas
5	rs1057519725	G	Missense	pathogenic	Thyroid, Large Intestine
6	rs112445441	C	Missense	pathogenic	Lung
7	rs121913238	G	Stop Gained	pathogenic	Lung, Thyroid, Large intestine
8	rs121913240	T	Missense	pathogenic	Lung, Thyroid, Large intestine
9	rs121913240	T	Missense	pathogenic	Lung, Thyroid, Large intestine
10	rs121913527	C	Missense	pathogenic	Large Intestine, Myeloma
11	rs121913528	C	Missense	pathogenic	Bladder
12	rs121913528	C	Missense	likely-pathogenic	Colorectal
13	rs121913529	C	Missense	pathogenic	Pancreas
14	rs121913530	C	Missense	pathogenic	Lung, Thyroid, Large intestine, Gallbladder
15	rs121913535	C	Missense	pathogenic	Lung, Thyroid, Large intestine
16	rs17851045	T	Missense	pathogenic	Lung
17	rs2141509932	T	Inframe Insertion	pathogenic	Brain
18	rs727503108	C	Missense	likely-pathogenic	Lung
19	rs770248150	T	Missense	pathogenic	Large Intestine

Panel details

Feature	Specification
Regulatory status	For Research Use Only
Indication	Cancer risk assessment (KRAS SNPs)
No. of targets	19 genetic loci (12 genetic loci)
Format	Microarray
Kit size	24 tests/8-pack
Throughput	1 test/chip
Compatible instrument	AxiLona EL-100
Control(s)	Internal control
Sample type(s)	Buccal swab
Turnaround time	2 hours
Cat.No.	S020001