

RANDOX

RANGER



**TESTING POWERED BY
MICROFLUIDICS, RESULTS
DELIVERED WITH BIOCHIP**

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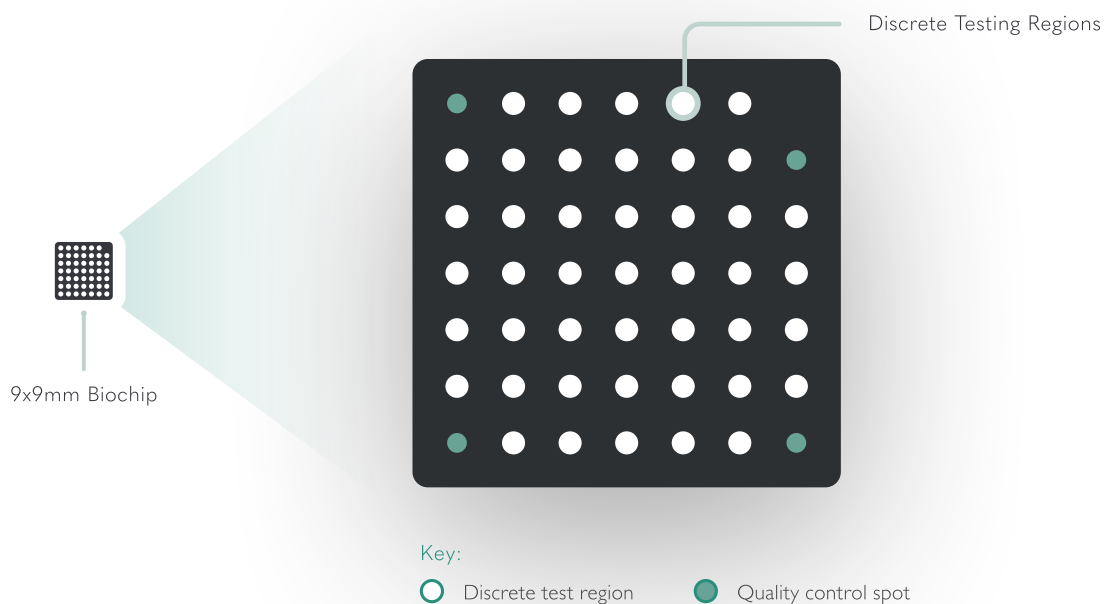
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BIOCHIP

Randox Biochip Array Technology is an innovative multiplex testing platform that allows for the simultaneous detection of multiple analytes from a single sample. This technology is based on a 9x9mm biochip, which functions as a solid-phase reaction vessel. Each biochip is pre-coated with discrete test regions (DTRs), enabling the detection of up to 140 different tests from one sample.

When a sample is applied to the biochip, specific reactions occur at each DTR, producing light signals. These signals are detected using fluorescence and analysed using digital imaging technology, identifying the presence of each analyte with high accuracy.



RANGER OVERVIEW

Ideal for testing at the point-of-care, the Randox's Ranger is a fully automated, benchtop analyser for high multiplexing SNP or sample analysis in less than 60 minutes from one single reaction card.

Providing fluorescence-based detection, powered by microfluidics, delivered with Biochip, the Ranger microfluidic cards enable precise sample and reagent handling ensuring minimal waste and testing efficiencies.

Ranger Key Features



Small fully automated analyser for PCR amplification and detection on one system



1 sample detecting up to 140 analytes



Capable of processing a range of sample matrices including DNA, whole blood and dried blood spots



Simple for non-laboratory staff to operate and maintain in various settings.



Digital connectivity: view and export results to USB, network or LIMS.

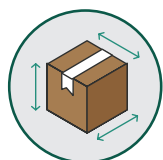


Intuitive software provides smart automation, streamlined workflows, and rapid results interpretation.



Simple 4 step process from sample entry to results

Ranger Specifications



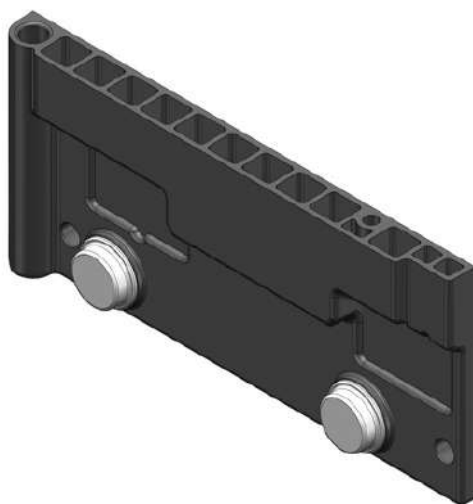
Dimensions:
246mm x 345mm
x 245mm



Weight:
11kg/24lb

MICROFLUIDIC CARD

Utilising Randox's patented biochip technology, Ranger Microfluidic Cards integrate fully automated PCR amplification and detection from a variety of sample types—all within a single, compact system.



Fully self-contained, pre-sealed design – all reagents and internal controls onboard to minimise cross-contamination.



Detection of up to 140 analytes with one sample



Compatible with various sample matrices

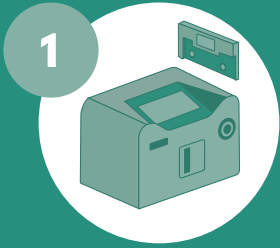


Room temperature storage of cards, providing less wastage and lower consumable costs.

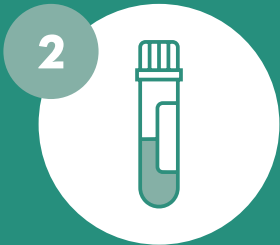


Ensured accuracy and reliability with individual internal amplification controls.

RANGER WORKFLOW



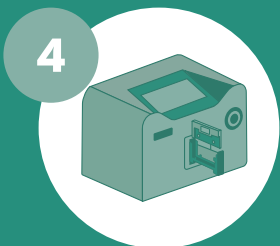
Input Ranger Card code



Input sample ID



Add sample into
Ranger card



Insert Ranger Card
and run test

MOLECULAR DIAGNOSTIC ASSAYS

Type 1 Diabetes SNP Array (GRS1)

Key Features



Discrimination between T1D and other non-autoimmune Diabetes.



Provides rapid genetic risk assessment for T1D.



Ability to genotype 10 SNPs from both HLA and non-HLA regions associated with T1D.



Can aid in accurate diagnosis to ensure proper patient care management and prevention of life-threatening complications.

SNP Targets Detected

SNP	GENES	SNP	GENES
rs2187668 rs7454108	DR3/DR4-DQ8 DR3/DR3 DR4-DQ8/DR4-DQ8 DR4-DQ8/X DR3/X	rs3129889	HLA_DRB1_15
		rs2476601	PTPN22
		rs689	INS
		rs12722495	IL2RA
		rs2292239	ERBB3
rs1264813	HLA_A_24	rs10509540	C10orf59
rs2395029	HLA_B_5701		

Type 1 Diabetes (GRS2)* IN DEVELOPMENT

Key Features



Advanced discrimination between T1D and other non-autoimmune diabeteses, suitable for multi-ethnic population screening.



Unique combination of 47 SNPs from both HLA and non-HLA regions commonly associated with T1D.

SNP Targets Detected

Locus or DQA1-DQB1 haplo	SNP	Locus or DQA1-DQB1 haplo	SNP
HLA-DQ22	rs1721169	B*3906	rs540653847
HLA-DQ25	rs9273369	B*4403	rs2524277
HLA-DQ42	rs12527228	B*5701	rs149663102
HLA-DQ51	rs10947332	C*0602	rs12189871
HLA-DQ53	rs1794265	ATXN2/SH2B3	rs653178
HLA-DQ61	rs117806464	ADAD1-IL21-AS1	rs17388568
HLA-DQ62	rs17843689	PTPN2	rs1893217
HLA-DQ63	rs62406889	UBASH3A	rs9981624
HLA-DQ69	rs16822632	INS	rs3842753
HLA-DQ73	rs1281935	PTPN22	rs2476601
HLA-DQ75	rs9469200	IL2RA	rs61839660
HLA-DQ81	rs9275490	CTLA4	rs3087243
HLA-DQ92	rs28746898	CD226	rs1615504
HLA-DQ93	rs9405117	CLEC16A	rs12708716
HLA-DQ76	rs118118976	BACH2	rs72928038
HLA-DQ64	rs114609017	CENPW	rs9388489
HLA-DQ52	rs149929277	HORMAD2	rs5763779
XL9 Regulatory	rs9271346	C1QTNF6	rs229541
Intergenic DRA1-DRB1 ND3	rs9269173	CTSH	rs2289702
BTNL2 Regulatory	rs116522341	IFIH1	rs2111485
DPB1*0101	rs17214657	MEG3	rs56994090
DPB1*0402	rs6934289	IKZF4/ERBB3	rs4759229
A*0201	rs12153924	RNLS	rs60888743
A*0301	rs9259118		

Celiac Disease

Key Features



Accurate discrimination of future disease risk aiding prioritisation of diagnostic investigations for other gastrointestinal diseases.



Provides rapid genetic assessment of celiac disease.



Ability to genotype 17 SNPs associated with celiac disease.



Can aid in accurate diagnosis to ensure proper patient care management and prevention of life-threatening complications.

Genetic Risk Panel						
rs9273369	rs7454108	rs1893217	rs2301226	rs1359062	rs6715106	rs1049124
rs653178	rs9981624	rs3128927	rs2030519	rs17264332	rs9469200	rs17388568
rs4143332	rs1611710	rs55743914				

