



**RANDOX**

# Custom Arrays for Biochip

Tailor made for all your research needs



# Introduction to Randox Research Division

Established in 1982, Randox Laboratories is a market leader in the clinical diagnostics industry. Randox develops and manufactures innovative, high quality solutions designed to make diagnostic testing quicker with greater accuracy and reliability. We are committed to saving lives by ensuring individuals worldwide have access to timely and correct diagnosis. With over 30 years experience as a global diagnostic company, Randox has now focused its innovative and novel technologies upon the research sector with a particularly strong emphasis upon oncology biomarker research. Randox

offers a comprehensive range of accurate arrays and markers designed to aid researchers in new industry developments, whilst adhering to its key focus of “revolutionising healthcare through improving diagnostics.”

Re-investing in research technology is an area in which Randox firmly believes, with 20% of total annual revenue reinvested in 250 highly trained and specialised R&D scientists and engineers who have introduced many pioneering technologies to the market.



# Biochip Array Technology Explained

## Introducing the Award-Winning Biochip Array Technology

Biochip Array Technology (BAT) is a multi-analyte testing platform facilitating the simultaneous quantitative or qualitative detection of a wide range of analytes from a single sample.

The core of the technology is the Randox biochip, a solid state device onto which antibodies specific to different compounds are immobilised and stabilised onto pre-defined areas of the biochip known as discrete test regions (DTRs).

Chemiluminescent immunoassays are employed for the biochip arrays. Light signal generated from each of the test regions on the biochip is simultaneously detected using digital imaging technology and compared to that from a calibration curve.

## The biochip surface

The surface of the biochip is chemically coated using a proprietary silanation process which allows for:

- Activation of the biochip surface – ensuring uniformity and reproducibility, minimising batch-to-batch variations
- Modification of surface chemistry during the activation process – controlled binding of antibodies in optimal orientation

## Control sites – ensuring reliable IQC

Each biochip contains internal control sites, which are always on the same position on every biochip. The control sites have set target levels in order to identify problems. If the levels for these control DTRs fall outside the target levels, an error code will be generated instead of a result. This prevents inaccurate results being reported.

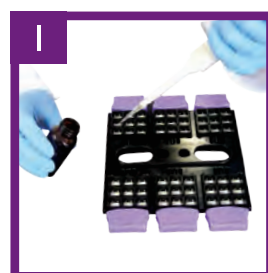
## Key Benefits

**Save time, save costs** - Multiple testing allows multiple tests to be carried out from a single patient sample reducing the amount of time and labour spent on performing individual tests.

**Ease of operation** - Straight forward testing procedure reducing operator error. Ready-to-use biochips. Minimal sample handling.

**Multiple matrices available** - Serum, plasma, whole blood, urine, tissue, cell culture supernatant, stool, saliva, bronchoalveolar lavage fluid and forensic matrices.

## How to Use a Biochip Analyser



Addition of assay reagents and sample to the biochips



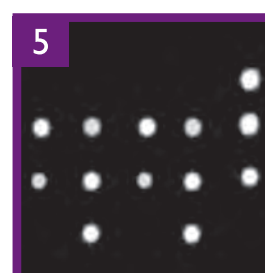
Place in thermoshaker - incubate for 60 minutes



Wash biochips - 2 quick washes, 4 soaks for 2 minutes each



Biochip carrier loaded into Evidence Investigator



Discrete test sites on each biochip for individual analytes

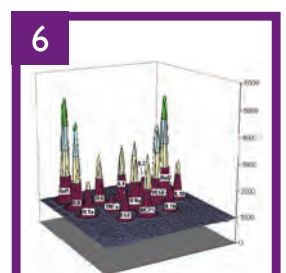


Image processing



# Evidence Investigator

Versatile, efficient and comprehensive testing

The bench-top, semi-automated Evidence Investigator offers complete patient profiling whilst boasting the most comprehensive test menu available on the market. The Evidence Investigator consolidates immunoassay and molecular diagnostics onto a single platform with protein and DNA biochips. A full reagent package is available, with no hidden costs or extra consumables required.

- Semi-automated
- Up to 702 tests in 70 minutes
- Multiple tests from 25µl sample
- Ability to store and retrieve work lists saving time
- Custom thermoshaker available
- Barcode scanner for sample traceability
- Bar-coded samples and reagents
- Internal back-up stores over six years of results
- User-defined cut-off levels without recalibrating
- Extensive QC data generation
- Retrospective reporting
- Password Protected Software
- Chain of custody features

## The Evidence Investigator Package



Evidence Investigator



PC & imaging software



Barcode scanner



Thermoshaker



Biochip carrier handling tray

## Key Benefits of the Evidence Investigator

### Quality Results

- Inter and Intra-assay CV's typically less than 10%
- Extensive QC capabilities with multi-analyte controls and calibrators available
- User defined reference ranges. Quantitative and qualitative results available

### Reduced Sample Volume

- Analyse a complete profile of biomarkers from as little as 25µl of sample
- Ideal for paediatric testing or when conservation of sample is critical

### Results Traceability

- Chain of custody features
- Bar-coded reagents and calibrators

# Custom Arrays

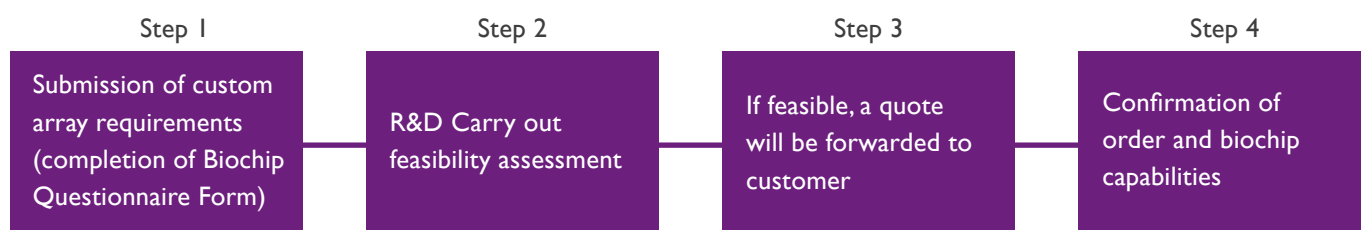
## How the process works

With over 300 markers available, Randox provides an extensive and diverse test menu. Should your needs exceed those provided by one of our standard arrays, or you are researching a particular set of analytes, we would encourage you to approach a Randox representative with

your specific requirements. Randox's expertise, state-of-the-art manufacturing facilities and highly specialised scientists enables us to provide a product and service tailored to a specific R&D or clinical trial requirement.

### Customised Biochip Array Planning

Randox will endeavour to work with you to ensure your needs are constantly met and provide a smooth process from the time of your first order until final delivery.



# Examples of Analytes Available for Custom Biochips

## Immunology

Analyte	Abbreviation	AKA
70 Kilodalton Heat Shock Proteins	HSP70	
A Proliferation-Inducing Ligand	APRIL	
Amphiregulin		
Apolipoprotein A I	APOA I	
Basal Cell Adhesion Molecule	BCAM	
B-cell Activating Factor	BAFF	
Caspase 1	CASP 1	
Caspase 6	CASP 6	
Caspase 9	CASP 9	
Chemokine (C-C motif) Ligand 1	CCL1	I-309
Chemokine (C-C motif) Ligand 13	CCL13	MCP4
Chemokine (C-C motif) Ligand 14	CCL14	HCC-1
Chemokine (C-C motif) Ligand 15	CCL15	MIP-5
Chemokine (C-C motif) Ligand 17	CCL17	TARC
Chemokine (C-C motif) Ligand 18	CCL18	PARC
Chemokine (C-C motif) Ligand 19	CCL19	MIP-3b
Chemokine (C-C motif) Ligand 20	CCL20	MIP-3a
Chemokine (C-C motif) Ligand 21	CCL21	Exodus-2
Chemokine (C-C motif) Ligand 22	CCL22	MDC
Chemokine (C-C motif) Ligand 26	CCL26	Eotaxin-3
Chemokine (C-C motif) Ligand 27	CCL27	CTACK
Chemokine (C-C motif) Ligand 28	CCL28	MEC
Chemokine (C-X-C motif) Ligand 1	CXCL1	GRO 1
Chemokine (C-X-C motif) Ligand 4	CXCL4	PF-4
Chemokine (C-X-C motif) Ligand 5	CXCL5	ENA-78
Chemokine (C-X-C motif) Ligand 7	CXCL7	NAP-2
Chemokine (C-X-C motif) Ligand 9	CXCL9	MIG
Chemokine (C-X-C motif) Ligand 11	CXCL11	I-TAC
Chemokine (C-X-C motif) Ligand 12	CXCL12	SDF-1
Chemokine (C-X-C motif) Ligand 13	CXCL13	BCA-1
Chemokine (C-X-C motif) Ligand 16	CXCL16	SRPSOX
Chemokine (C-X-C motif) Ligand 17	CXCL17	VCC-1
Chemokine 3 Ligand 1	CX3CL1	Fractalkine
Cluster of Differentiation 4	CD4	
Cluster of Differentiation 14	CD14	
Cluster of Differentiation 28	CD28	
Cluster of Differentiation 30	CD30	
Cluster of Differentiation 36 (soluble)	sCD36	
Cluster of Differentiation 56	CD56	
Cluster of Differentiation 66e	CD66e	CEACAM5
Cluster of Differentiation 127	CD127	
Cluster of Differentiation 163	CD163	
Complement 3	C3	
Connective Tissue Growth Factor	CTGF	
Defensin	NPI	
Elafin	SKALP	
Eotaxin	CCL11	
Epidermal Growth Factor	EGF	
Epidermal Growth Factor Receptor	EGFR	

Analyte	Abbreviation	AKA
Epigen	EPGN	
E-selectin	ESEL	
Fibrinogen	Fib	
Fibroblast Growth Factor (basic)	FGF-beta	FGF2
Fibroblast Growth Factor 4	FGF-4	
Fibroblast Growth Factor 7	FGF-7	
Fibroblast Growth Factor 19	FGF-19	
Fibroblast Growth Factor 21	FGF-21	
Fibroblast Growth Factor 23	FGF-23	
Fibronectin	FN	
FMS-Related Tyrosine Kinase 1	FLT-1	VEGFR1
FMS-Related Tyrosine Kinase 3	FLT-3 Ligand	CD135
Granulocyte Colony Stimulating Factor	G-CSF	CSF3
Granulocyte-Macrophage Colony-Stimulating Factor	GMCSF	
Granzyme B	GZMB	
Growth Differentiation Factor 11	GDF-11	
Growth Differentiation Factor 15	GDF-15	
Growth Differentiation Factor 8/Myostatin	GDF-8	
Haptoglobin	HP	
Heat Shock Protein 70	HSP-70	
Heme Oxygenase-1	HO-1	
Heparin-Binding Epidermal Growth Factor	HB-EGF	
Hepatocyte Growth Factor	HGF	
Human beta Defensin 2	BD-2	
Hypoxia-Inducible Factor 1, alpha Subunit	HIF-1 $\alpha$	
Immunoglobulin E	IgE	
Insulin Growth Factor	IGF1	
Insulin Growth Factor 2	IGF2	
Insulin Like Growth Factor 1 Receptor	IGF1R	
Insulin Like Growth Factor 2 Receptor	IGF2R	
Insulin Like Growth Factor Binding Protein 2	IGFBP2	
Insulin Like Growth Factor Binding Protein 3	IGFBP3	
Insulin-Like Growth Factor 1	IGF-1	
Intercellular Adhesion Molecule 1	ICAM-1	
Interferon alpha	IFN $\alpha$	
Interferon gamma	IFN $\gamma$	
Interferon gamma-induced Protein 10	IP-10	
Interleukin 1 alpha	IL-1 $\alpha$	
Interleukin 1 beta	IL-1 $\beta$	
Interleukin 1 Receptor 4	IL-1R4	ST2
Interleukin 1 Receptor alpha	IL-1R $\alpha$	
Interleukin 2	IL-2	
Interleukin 3	IL-3	
Interleukin 4	IL-4	
Interleukin 5	IL-5	
Interleukin 6	IL-6	
Interleukin 7	IL-7	
Interleukin 8	IL-8	
Interleukin 9	IL-9	

Analyte	Abbreviation	AKA
Interleukin 10	IL-10	
Interleukin 11	IL-11	
Interleukin 12	IL-12	
Interleukin 12p40	IL-12p40	
Interleukin 12p70	IL-12p70	
Interleukin 13	IL-13	
Interleukin 15	IL-15	
Interleukin 16	IL-16	
Interleukin 17A	IL-17A	
Interleukin 17F	IL-17F	
Interleukin 18	IL-18	
Interleukin 21	IL-21	
Interleukin 22	IL-22	
Interleukin 23	IL-23	
Interleukin 26	IL-26	
Interleukin 33	IL-33	
Leukotriene B4	LTB4	
LIGHT	TNFSF14	CD258
L-selectin	LSEL	
Lymphotactin	XCL1	
Macrophage Colony Stimulating Factor	M-CSF	CSF-1
Macrophage Inflammatory Protein 1 alpha	MIP-1 $\alpha$	CCL3
Macrophage Inflammatory Protein 1b	MIP-1b	CCL4
Macrophage Migration Inhibitory Factor	MIF	
MHC Class I Chain Related Protein A	MICA	
Midkine	MK	
Monocyte Chemotactic Protein-1	MCP-1	CCL2
Monocyte Chemotactic Protein 2	MCP-2	
Monocyte Chemotactic Protein 3	MCP-3	CCL7
Interferon alpha	IFN $\alpha$	CCL2
Neutrophil Elastase	ELA2	
Nitrotyrosine	NT	
Oligoadenylate Synthetase 1	OAS1	
Placental Growth Factor	PGF	PIGF
Platelet Derived Growth Factor	PDGF	
Platelet Derived Growth Factor - AA	PDGF-AA	
Platelet Derived Growth Factor Receptor beta	PDGFRB	
Platelet Derived Endothelial Cell Growth Factor	PD-ECGF	
Platelet Drived Growth Factor BB	PDGF-BB	
P-selectin	PSEL	
RANKL	TNFSF11	
Receptor Activator of Nuclear Factor Kappa-B Ligand	sRANKL	OPGL
Regenerating Islet Derived Protein 3 alpha	REG3a	
Regulated and Normal T cell Expressed and Secreted	RANTES	CCL5
S100 Calcium Binding Protein A8	S100A8	

Analyte	Abbreviation	AKA
S100A12	EN-RAGE	
S100A8/A9		
Secretory IgA	IgA	
Serum Amyloid A	SAA	
Soluble CD40 Ligand	sCD40L	
Soluble Interleukin 2 Receptor alpha	sIL-2Ra	
Soluble Interleukin 6 Receptor alpha	sIL-6Ra	
Soluble Interleukin 15 Receptor alpha	sgp130	
Soluble Tumor Necrosis Factor Receptor 1	sTNFR1	
Soluble Tumor Necrosis Factor Receptor 2	sTNFR2	
Stem Cell Factor	SCF	
Stem Cell Factor Receptor	SCFR	
Stromal Cell Derived Factor-1	SDF-1	
Surfactant Protein A	SP-A	
Surfactant Protein D	SP-D	
Surfactant Pulmonary Associated Protein D	SPD	
Thrombopoietin	THPO	
Tissue Inhibitor of Metalloproteinase 1	TIMP-1	
Tissue Inhibitor of Metalloproteinase 2	TIMP-2	
Tissue Inhibitor of Metalloproteinase 3	TIMP-3	
Tissue Inhibitor of Metalloproteinase 4	TIMP-4	
Transferrin	TF	
Transforming Growth Factor alpha	TGF- $\alpha$	
Transforming Growth Factor beta 1	TGF- $\beta$ 1	
Transforming Growth Factor beta 2	TGF- $\beta$ 2	
Transforming Growth Factor beta 3	TGF- $\beta$ 3	
Trefoil Factor 3	TFF3	
Tumor Necrosis Factor Ligand Superfamily Member 12	TWEAK	TNFSF12
Tumour Necrosis Factor alpha	TNF- $\alpha$	
Tumour Necrosis Factor beta	TNF- $\beta$	
Tumour Necrosis Factor Receptor II	TNFR2	
Tyrosine Kinase with Immunoglobulin-like and EGF-like Domains 1	Tie-1	
Tyrosine Kinase with Immunoglobulin-like and EGF-like Domains 2	Tie-2	
Uteroglobin	CC16	
Vascular Cell Adhesion Protein 1	VCAM-1	
Vascular Endothelial Growth Factor	VEGF	
Vascular Endothelial Growth Factor A	VEGF $\alpha$	
Vascular Endothelial Growth Factor B	VEGF $\beta$	
Vascular Endothelial Growth Factor C	VEGF $\gamma$	
Vascular Endothelial Growth Factor D	VEGF $\delta$	
Vascular Endothelial Growth Factor Receptor 1	VEGFR1	
Vascular Endothelial Growth Factor Receptor 2	VEGFR2	
Vascular Endothelial Growth Factor Receptor 3	VEGFR3	
X-linked Inhibitor of Apoptosis Protein	XIAP	

# Examples of Analytes Available for Custom Biochips

## Metabolic / Nutrition

Analyte	Abbreviation	AKA
Adiponectin	GBP-28	
Adrenocorticotrophic Hormone	ACTH	
Agouti	AgRP	
Apolipoprotein A1	APOA1	
Brain Derived Neurotrophic Factor	BDNF	
Chemerin	RARRES2	
Clusterin (Apolipoprotein J)	ApoJ	
C-Peptide*	CPEP	
C-Reactive Protein*	CRP	
Cystatin C*	CST3	
Dickkopf Related Protein 1	DKK-1	
Ferritin*	FTN	
Fibroblast Growth Factor 19	FGF-19	
Fibroblast Growth Factor 21	FGF-21	
Fibroblast Growth Factor 23	FGF-23	
Follicle-Stimulating Hormone	FSH	
Gastric Inhibitory Polypeptide	GIP	
Ghrelin	GHRL	
Glucagon	GCG	
Glucagon-like Peptide-1	GLP-1	
Haptoglobin	HP	
Insulin*	INS	
Insulin Growth Factor	IGF1	
Insulin Growth Factor 2	IGF2	
Insulin-Like Growth Factor 1 Receptor	IGF1R	
Insulin-Like Growth Factor 2 Receptor	IGF2R	
Insulin-Like Growth Factor Binding Protein 2	IGFBP2	
Insulin-Like Growth Factor Binding Protein 3	IGFBP3	
Insulin-Like Growth Factor 1	IGF-1	

Analyte	Abbreviation	AKA
Interleukin 1 beta	IL-1b	
Interleukin 6	IL-6	
Interleukin 8	IL-8	
Leptin	LEPT	
Lipopolysaccharide Binding Protein	LBP	
Lipoprotein-Associated Phospholipase A2	Lp-PLA2	
Luteinizing Hormone*	LH	
Monocyte Chemotactic Protein-1	MCP-1	CCL2
Nerve Growth Factor	NGFbeta	
Neutrophil Gelatinase-Associated Lipocalin	NGAL	
Orexin A	OA	
Osteoactivin		
Osteocalcin	PGLAP	SPP1
Osteopontin	OPN	
Osteoprotegerin	TNFSF11B	
Oxidised Low-Density-Lipoproteins	ox-LDL	TSG-14
Pepsinogen 1	PGI	
Peptide YY (Tyrosine Tyrosine)	PYY	
Plasminogen Activator Inhibitor-1	PAI-1	Serpin E1
Pro Insulin	INS	
Prolactin*	PRL	
Proprotein Convertase Subtilisin/Kexin Type 9	PCSK9	
Resistin	ADSF	
Retinol Binding Protein 4	RBP-4	
Sclerostin	SOST	
Thyroid-Stimulating Hormone	TSH	
Tumour Necrosis Factor alpha	TNF-a	
Visfatin	PBEF1	

\*These assays have clinical implications and require QA approval before order is accepted



## Oncology

Analyte	Abbreviation	AKA
Adiponectin*	GBP-28	
Adrenomedullin	ADM	
Angiopoietin I	ANG1	
Angiopoietin II	ANG2	
B-cell Lymphoma Extra Large	BCL-XL	
Bcl-2 Associated X Protein	Bax	
Brachyury	T	
Calcitonin	CT	
Caspase 1	CASP 1	
Caspase 6	CASP 6	
Caspase 9	CASP 9	
Cleaved Poly ADP Ribose Polymerase	CleavedPARP	
Connective Tissue Growth Factor	CTGF	
Cyfra 21-I		
Cytokeratin 18 M-65	CK18	
Dickkopf Related Protein 1	DKK-1	
Endothelin-1	EDN1	
Epidermal Growth Factor	EGF	
Epiregulin		
Fibroblast Growth Factor (basic)	FGF-beta	FGF2
Fibroblast Growth Factor 4	FGF-4	
Fibroblast Growth Factor 7	FGF-7	
Fibroblast Growth Factor 19	FGF-19	
Fibroblast Growth Factor 21	FGF-21	
Fibroblast Growth Factor 23	FGF-23	
Fibronectin	FN	
Folate Receptor alpha	FOLR1	
Follistatin	FST	
Galectin 3	G3	
Granulocyte Colony Stimulating Factor	G-CSF	CSF3
Growth Differentiation Factor 15	GDF-15	
Heparin-Binding Epidermal Growth Factor	HB-EGF	
Hepatocyte Growth Factor	HGF	
Heregulin	NRG-1	
Histone Deacetylase 6	HDAC 6	
Human Growth Hormone	HGH	
Insulin*	INS	
Insulin-Like Growth Factor Binding Protein 3	IGFBP3	
Insulin-Like Growth Factor I	IGF-I	
Interferon gamma	IFNg	
Interleukin 1 alpha	IL-1 $\alpha$	
Interleukin 1 beta	IL-1 $\beta$	
Interleukin 6	IL-6	

Analyte	Abbreviation	AKA
Interleukin 8	IL-8	
Kirsten Rat Sarcoma Viral Oncogene	K-RAS	
Leptin	LEPT	
Leukemia Inhibitory Factor	LIF	
Macrophage Migration Inhibitory Factor	MIF	
Matrix Metalloproteinase 1	MMP-1	
Matrix Metalloproteinase 2	MMP-2	
Matrix Metalloproteinase 3	MMP-3	
Matrix Metalloproteinase 7	MMP-7	
Matrix Metalloproteinase 8	MMP-8	
Matrix Metalloproteinase 9	MMP-9	
Midkine	MK	
Mucin-1	MUC-1	
Myeloperoxidase	MPO	
Neuron-Specific Enolase	NSE	
Osteopontin	OPN	
Osteoprotegerin	TNFSF11B	
pi Glutathione S-Transferase	pi-GST	
Prolactin *	PRL	
RANKL	TNFSF11	
Receptor Activator of Nuclear Factor Kappa-B Ligand	sRANKL	OPGL
Regulated and Normal T cell Expressed and Secreted	RANTES	CCL5
Soluble Tumor Necrosis Factor Receptor 1	sTNFR1	
Soluble Tumor Necrosis Factor Receptor 2	sTNFR2	
Stem Cell Factor	SCF	
Thrombospondin-1	TSP-1	
Tissue Inhibitor of Metalloproteinase 1	TIMP-1	
Transferrin*	TF	
Transforming Growth Factor alpha	TGF-a	
Trefoil Factor 3	TFF3	
Tumour Necrosis Factor alpha	TNF-a	
u-Plasminogen Activator	uPA	
Urokinase Receptor	uPAR	
Uteroglobin	CC16	
Vascular Endothelial Growth Factor	VEGF	
Vascular Endothelial Growth Factor A	VEGFa	
Vascular Endothelial Growth Factor B	VEGFb	
Vascular Endothelial Growth Factor C	VEGFc	
Vascular Endothelial Growth Factor D	VEGFd	
X-linked Inhibitor of Apoptosis Protein	XIAP	
YKL-40/Cartilage Glycoprotein 39	YKL-40	

\*These assays have clinical implications and require QA approval before order is accepted

# Examples of Analytes Available for Custom Biochips

## Endocrine

Analyte	Abbreviation	AKA
17-Hydroxyprogesterone*	PROG	
Activin A		
Anti-Müllerian Hormone	AMH	MIF, MIS, MIH
Calcitonin	CT	
Dehydroepiandrosterone	DHEAS	
Erythropoietin	EPO	
Estradiol*	E2	
Leptin	LEPT	

\*These assays have clinical implications and require QA approval before order is accepted

Analyte	Abbreviation	AKA
Luteinizing Hormone*	LH	
Progesterone*		
Sex Hormone-Binding Globulin	sHBG	
Testosterone*	TEST	
Thyroid-Stimulating Hormone*	TSH	
Thyroxine*	T4	
Triiodothyronine*	T3	

## Cardiovascular/ Cerebrovascular

Analyte	Abbreviation	AKA
70 kilodalton heat shock proteins	HSP70	
A Disintegrin And Metalloproteinase with Thrombospondin Motifs 1	ADAMTS-1	
Adiponectin *	GBP-28	
Adrenomedullin	ADM	
Alpha-2 Macroglobulin	a-2M	
Serum Amyloid A	SAA	
Angiotensin II		
Atrial Natriuretic Peptide	ANP	
Brain Natriuretic Peptide	BNP	
Brain-Derived Neurotrophic Factor	BDNF	
Carbonic Anhydrase III	CaII	
Cardiac Troponin I*	cTnI	
Chemokine (C-X-C motif) Ligand 16	CXCL16	SRPSOX
C-Reactive Protein *	CRP	
Creatine Kinase *	CKMB	
D-Dimer*	DD	
Erythropoietin	EPO	
E-selectin	ESEL	
Fatty Acid Binding Protein 1	FABP1	
Fatty-Acid Binding Protein	FABP	
Fibrinogen	Fib	
Follistatin	FST	
Glial Fibrillary Acidic Protein	GFAP	
Glycogen Phosphorylase Isoenzyme BB	GPBB	
Growth Differentiation Factor 15	GDF-15	
Haptoglobin	HP	
Heat Shock Protein 70	HSP-70	
Heme Oxygenase-1	HO-1	
Hemopexin	HPX	
Intercellular Adhesion Molecule 1	ICAM-1	
Interleukin 1 beta	IL-1b	
Interleukin 10	IL-10	

Analyte	Abbreviation	AKA
Interleukin 6	IL-6	
Interleukin 8	IL-8	
LIGHT	TNFSF14	CD258
L-Selectin	LSEL	
Matrix Metalloproteinase 1	MMP-1	
Matrix Metalloproteinase 2	MMP-2	
Matrix Metalloproteinase 3	MMP-3	
Matrix Metalloproteinase 7	MMP-7	
Matrix Metalloproteinase 8	MMP-8	
Matrix Metalloproteinase 9	MMP-9	
Matrix Metalloproteinase 13	MMP-13	
Monocyte Chemotactic Protein-1	MCP-1	CCL2
Myeloperoxidase	MPO	
Myoglobin*	MYO	
Neuregulin 1	NRG-1	
Neutrophil Gelatinase-Associated Lipocalin	NGAL	
N-Terminal Pro b-Type Natriuretic Peptide	NT-proBNP	
Pentraxin-Related Protein	PTX 3	
Placental Growth Factor	PGF	PIGF
Plasminogen Activator Inhibitor-1	PAI-1	Serpin E1
Proprotein Convertase Subtilisin/Kexin Type 9	PCSK9	
P-selectin	PSEL	
Renin	REN	
Resistin	ADSF	
SI00A8/A9		
Thrombomodulin	TM	
Tissue Inhibitor of Metalloproteinase 1	TIMP-1	
Tissue Inhibitor of Metalloproteinase 2	TIMP-2	
Tissue Inhibitor of Metalloproteinase 3	TIMP-3	
Tissue Inhibitor of Metalloproteinase 4	TIMP-4	
Tumour Necrosis Factor alpha	TNF-a	
Vascular Cell Adhesion Protein 1	VCAM-1	
Vascular Endothelial Growth Factor	VEGF	

\*These assays have clinical implications and require QA approval before order is accepted

## Bone

Analyte	Abbreviation	AKA
Bone Alkaline Phosphatase	ALAP	
Bone Morphogenetic Protein 6	BMP6	
Calcitonin	CT	
Cartilage Oligomeric Matrix Protein	COMP	
Collagen Type 2	C2M	COL2
Collagen Type 3	C3M	COL3

Analyte	Abbreviation	AKA
Collagen Type 4	C4M	COL4
Osteoprotegerin	TNFSF11B	
RANKL	TNFSF11	
Receptor Activator of Nuclear Factor Kappa-B Ligand	sRANKL	OPGL

## Toxicity

Analyte	Abbreviation	AKA
Albumin	ALB	
Beta-2 Microglobulin	b-2M	
Clusterin (Apolipoprotein J)	ApoJ	
Cystatin C *	CST3	
Epidermal Growth Factor	EGF	
Glutathione S-Transferase A1	GSTA1	
Interferon gamma-induced Protein 10	IP-10	
Kidney Injury Molecule 1	KIM-1	
Liver Fatty Acid Binding Protein	FABP1	LFABP

Analyte	Abbreviation	AKA
Neutrophil Gelatinase-Associated Lipocalin	NGAL	
Osteopontin	OPN	
Tissue Inhibitor of Metalloproteinase 1	TIMP-1	
Transforming Growth Factor Beta 1	TGF-b1	
Transforming Growth Factor Beta 2	TGF-b2	
Transforming Growth Factor Beta 3	TGF-b3	
Uromodulin	UMOD	THP
Vascular Endothelial Growth Factor	VEGF	

\*These assays have clinical implications and require QA approval before order is accepted

## Neuroscience

Analyte	Abbreviation	AKA
Alpha Synuclein	SNCA	
Alpha-1 Antitrypsin	a-1-AT	
Alpha-1 Microglobulin	a-1M	
Alpha-2 Macroglobulin	a-2M	
Artemin	ARTN	
Brain-Derived Neurotrophic Factor	BDNF	
Cathepsin C	CTSC	
Complement 3	C3	
Complement 3a	C3a	
C-Reactive Protein *	CRP	
Ferritin *	FTN	
Ferritin Light Chain	FTL	
Glial Fibrillary Acidic Protein	GFAP	
Haptoglobin	HP	
Histone Deacetylase 6	HDAC 6	
Huntingtin	Httg	
Intercellular Adhesion Molecule 1	ICAM-1	
Leptin	LEPT	
Matrix Metalloproteinase 1	MMP-1	
Matrix Metalloproteinase 2	MMP-2	
Matrix Metalloproteinase 3	MMP-3	

Analyte	Abbreviation	AKA
Matrix Metalloproteinase 7	MMP-7	
Matrix Metalloproteinase 8	MMP-8	
Matrix Metalloproteinase 9	MMP-9	
Myeloperoxidase	MPO	
Nerve Growth Factor	NGFbeta	
Neuron-Specific Enolase	NSE	
Nuclear Factor 2	NRF2	
Persephin		
Plasminogen Activator Inhibitor-1	PAI-1	Serpin E1
Platelet Derived Growth Factor - AA	PDGF-AA	
Platelet Derived Growth Factor BB	PDGF-BB	
Regulated and Normal T cell Expressed and Secreted	RANTES	CCL5
Serotonin	5-HT	
Serum Amyloid A	SAA	
Tissue Inhibitor of Metalloproteinase 1	TIMP-1	
Tissue Inhibitor of Metalloproteinase 2	TIMP-2	
Tissue Inhibitor of Metalloproteinase 3	TIMP-3	
Tissue Inhibitor of Metalloproteinase 4	TIMP-4	
Ubiquitin Carboxy-Terminal Hydrolase L1	UCH-L1	
Vascular Cell Adhesion Molecule 1	VCAM-1	
X-linked Inhibitor of Apoptosis Protein	XIAP	

\*These assays have clinical implications and require QA approval before order is accepted

# RANDOX

## International Headquarters

Randox Laboratories Limited, 55 Diamond Road, Crumlin, County Antrim, United Kingdom, BT29 4QY

**T** +44 (0) 28 9442 2413 **F** +44 (0) 28 9445 2912 **E** [marketing@randox.com](mailto:marketing@randox.com) **I** [www.randox.com](http://www.randox.com)



### Australia

Randox (Australia) Pty Ltd.  
Tel: +61 (0) 2 9615 4640



### Brazil

Randox Brasil Ltda.  
Tel: +55 11 5181-2024



### China

Randox Laboratories Ltd.  
Tel: +86 021 6288 6240



### Czech Republic

Randox Laboratories S.R.O.  
Tel: +420 2 1115 1661



### France

Laboratoires Randox  
Tel: +33 (0) 130 18 96 80



### Germany

Randox Laboratories GmbH  
Tel: +49 (0) 2151/93 706-11



### Hong Kong

Randox Laboratories Hong Kong Limited  
Tel: +852 3595 0515



### Italy

Randox Laboratories Ltd.  
Tel: +39 06 9896 8954



### India

Randox Laboratories India Pvt Ltd.  
Tel: +91 22 6714 0600



### Poland

Randox Laboratories Polska Sp. z o.o.  
Tel: +48 22 862 1080



### Portugal

Irandox Laboratorios Quimica Analitica Ltda  
Tel: +351 22 589 8320



### Puerto Rico

Clinical Diagnostics of Puerto Rico, LLC  
Tel: +1 787 701 7000



### Republic of Ireland

Randox Teoranta  
Tel: +353 7495 22600



### Slovakia

Randox S.R.O.  
Tel: +421 2 6381 3324



### South Africa

Randox Laboratories SA (Pty) Ltd.  
Tel: +27 (0) 11 312 3590



### South Korea

Randox Korea  
Tel: +82 (0) 31 478 3121



### Spain

Laboratorios Randox S.L.  
Tel: +34 93 475 09 64



### Switzerland

Randox Laboratories Ltd. (Switzerland)  
Tel: +41 41 810 48 89



### USA

Randox Laboratories-US, Ltd.  
Tel: +1 304 728 2890



### Vietnam

Randox Laboratories Ltd.Vietnam  
Tel: +84-8-39 11 09 04

# RANDOX

Randox Laboratories Limited, 55 Diamond Road, Crumlin, County Antrim, BT29 4QY, United Kingdom

**T** +44 (0) 28 9442 2413 **F** +44 (0) 28 9445 2912 **E** [marketing@randox.com](mailto:marketing@randox.com) **I** [www.randox.com](http://www.randox.com)

Information correct at time of print.

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