



Thermo Scientific  
B·R·A·H·M·S KRYPTOR compact PLUS



# Exceptional precision

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## Extraordinary performance

Fully automated random access immunoanalyzer • Innovative biomarkers for diagnosis, follow-up, and treatment control • Unique Nobel Prize®-winning TRACE measuring principle • Intelligent dilution

**Thermo**  
SCIENTIFIC



# Nobel Prize<sup>®</sup> awarded TRACE<sup>™</sup> technology

## Origin of diagnostical lead

### Procalcitonin (PCT) – the best in sepsis diagnosis

- Early detection of clinically relevant bacterial infection
- PCT-based decision algorithm allows
  - to significantly reduce the duration of antibiotic therapy
  - to shorten the length of stay in the intensive care unit



### Early rule-out of AMI with Copeptin

- Early rule-out of acute myocardial infarction (AMI) just after onset of symptoms
- Rule-out with two biomarkers (Copeptin and Troponin) allows a better risk assessment of patients suspicious of Acute Coronary Syndrome (ACS)
- Better risk assessment leads to optimized patient management and efficient use of cath lab resources

### Direct testing for diabetes insipidus with CT-proAVP

- CT-proAVP is a stable surrogate for vasopressin
- Simple and reliable differential diagnosis of polyuria-polydipsia-syndrome
- Reduced physical and psychological stress for patients
- Savings on total costs through reduction of labor costs and additional laboratory tests

### Prenatal screening markers on KRYPTOR™ – the Gold standard

- Excellent long term precision and lot-to-lot stability of the biomarkers Free  $\beta$ hCG and PAPP-A
- Confident risk assessment for chromosomal abnormalities
- In routine use by Fetal Medicine Foundation since 1999

### Superior risk stratification with MR-proADM

- Unique risk stratification of patients with lower respiratory tract infections (LRTI)
- Improving the assignment of patients to the most appropriate treatment site
- Economically beneficial due to optimized patient management and resource allocation



### Proven quality in thyroid diagnostics

- TRAK human – the proven tool in diagnosis and prognosis of Graves' disease
- Confident Tg results due to minimal assay interference and reliable confirmation test for confident follow-up of thyroid cancer patients

### Optimal follow-up of cancer patients

- Excellent marker stability and inter-lot precision for safe patients follow up by serial tumor marker determination
- NEW on the panel: The first and only fully automated Chromogranin A assay

Outstanding precision is the hallmark of KRYPTOR performance.



# TRACE precision

## Your advantage

### Extraordinarily precise

- Exceptional intra- and inter-assay precision, in relation to respective parameter information
- Homogeneous assay architecture eliminates wash and separation steps
- Timely alarm in case of bubbles and particles in specimen

### Fast processing

- Short incubation time
- Intelligent dilution: fast recognition of specimens where concentration is outside the direct measurement range. After a maximum of five minutes, automatic dilution is programmed and thereby guarantees rapid and efficient availability of results, especially in high-priority requests ("emergency assays").
- Real Random Access as well as STAT processing (immediate analysis of emergency samples)
- High reagent capacity for up to 800 determinations

### Easy and efficient

- Low hands-on time with minimal operating effort
- Long recalibration intervals (typically 14-days, 1 or 2 point calibration)
- Economical use of consumables
- Small quantities of waste
- Bidirectional online connection to a laboratory information system (LIS) and prenatal screening risk calculation software
- Predominantly automated, software-controlled maintenance
- Optional modem connectivity enables quick user support
- Windows™-based software with color-coded real-time status display





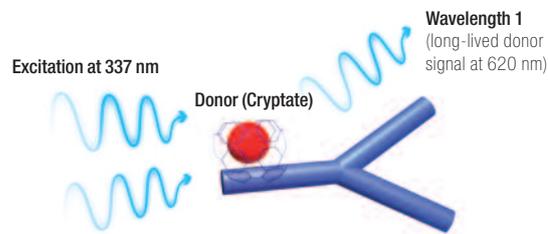
Thermo Scientific™  
B-R-A-H-M-S™ KRYPTOR  
compact PLUS:  
fully automated random  
access immunoanalyzer  
with Nobel prized TRACE  
technology

# Proven benefit

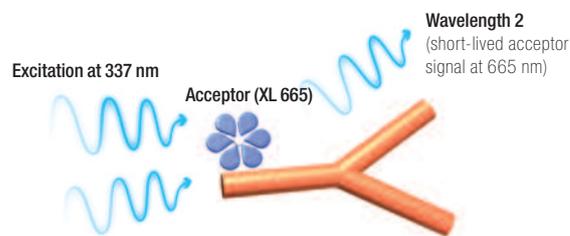
## For safe clinical diagnosis

### Unique measuring principle

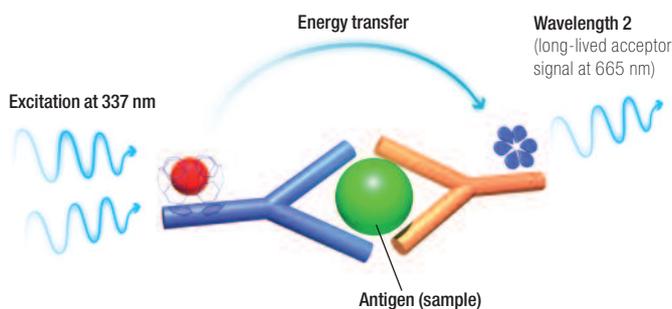
TRACE (Time Resolved Amplified Cryptate Emission) is a fascinatingly elegant method which measures the signal that is emitted from an immuno complex with time delay based on nonradiative energy transfer from a donor to an acceptor. It is based on the basic research for which the French chemist Jean-Marie Lehn received a Nobel Prize®.



**Long-lived fluorescence signal by donor**  
By supply of energy (laser 337 nm) the cryptate (labeled to an antibody) emits energy in a long-lived fluorescence signal of specific wavelength 1



**Short-lived fluorescence signal by acceptor**  
By supply of energy (laser 337 nm), wavelength 2 (labeled to an antibody) emits energy in a short-lived fluorescence signal



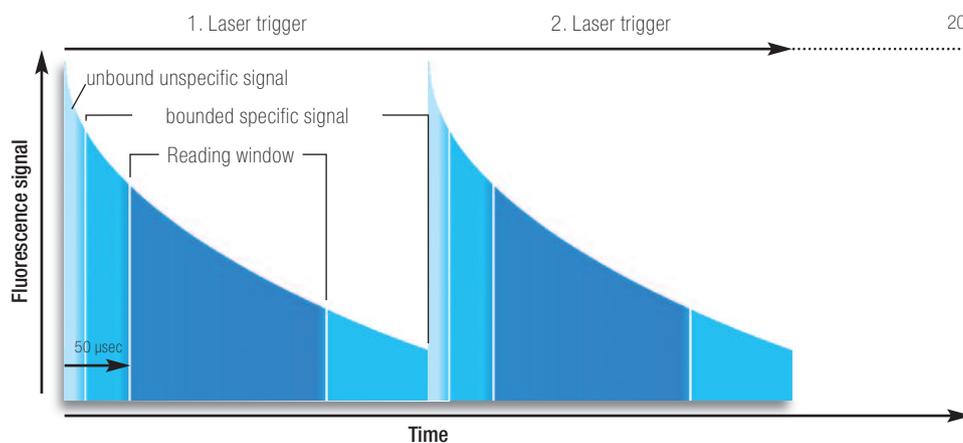
**Immuno complex prolongs acceptor signal**  
The energy transfer is possible because of the proximity of the donor and the acceptor in a formed immune complex and the spectral overlap between donor emission and acceptor absorption spectra. When both donor and acceptor are bound in an immune complex, both the signal amplification and the prolonged life span of the acceptor signal occur at wavelength 2, so that it can be measured in  $\mu$ -seconds. The long-lived signal is proportional to the concentration of the analyte to be measured.

## Precise measurement of analyte concentration

- Reading starts 50  $\mu\text{sec}$  after every laser trigger detection of only the long-lived acceptor signal of the immune complex
- No measurement of unspecific signals (e.g. short-lived fluorescence of unbound acceptor or background signals from analyte)

## Highest reliability through simultaneous reference reading

- Reading of unspecific signals (unbound) at the same time as specific immune complex
- Automatic ratio calculation between unspecific and specific signals eliminates interfering influences (e.g. generated by turbidity)



- Per reading 20 laser triggers (337 nm)
- Reading window starts 50  $\mu\text{sec}$  after laser trigger to the sample





## Easy to handle

# KRYPTOR compact PLUS software

- **Intuitive interface**

The easy-to-learn interface depicts all the essential processes in the system, so you have all information on the system status at any time

- **Bar-coded reagents and consumables**

All essential data are bar-coded facilitating data entry, reducing errors and saving time

- **Calibration curve**

Results of calibration presented graphically

- **Worklist**

Simple user navigation and clear representations enable you to request new measurements at any time

- **Carousel status**

With the graphic, color-coded carousel status window you can determine the stage of processing of individual specimen at any time

- **Results overview**

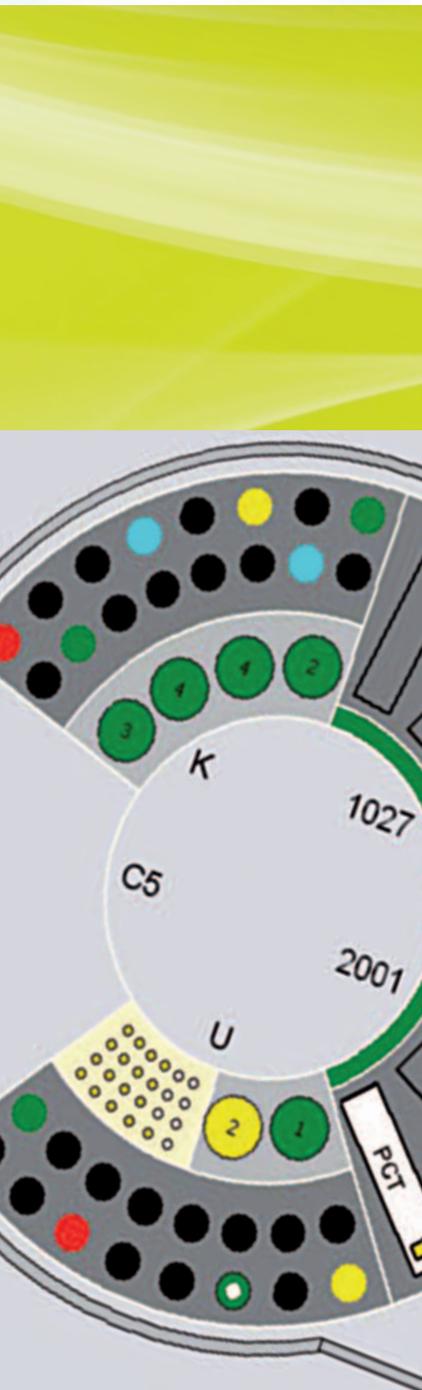
All data are clearly presented with the results

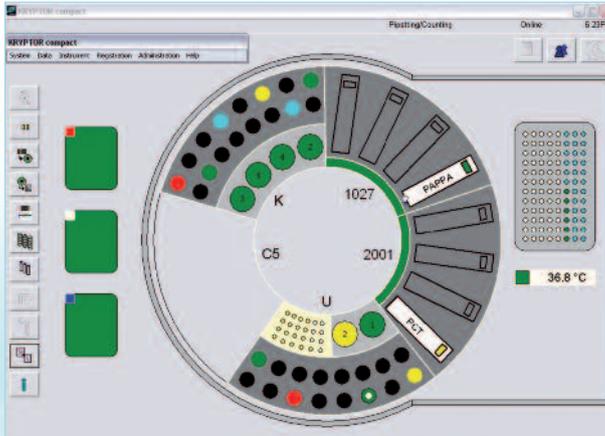
- **Quality control**

The graphic representation of the control results helps you to maintain an overview

- **Online connection features**

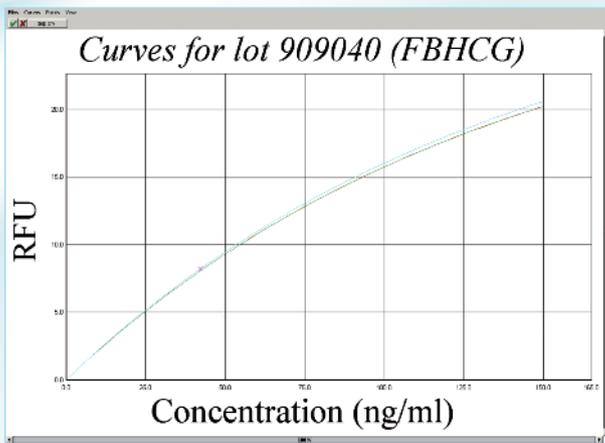
- Universal interface to laboratory information system (LIS) and prenatal screening risk calculation software
- Quick and easy support via modem connection
- Simple and secure bidirectional connection using network connection or RS232 interface



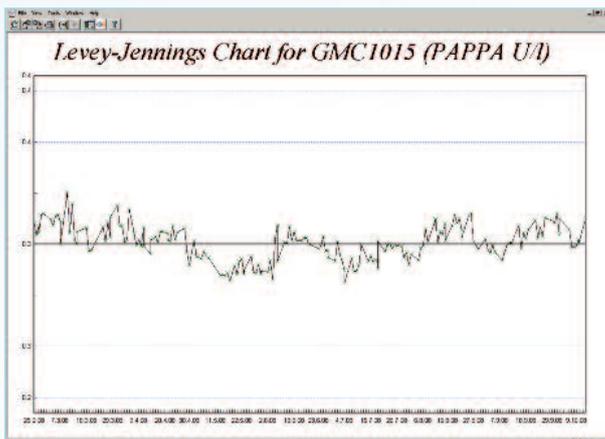


Carousel status visible at a glance: calibrators, controls and specimens

Intuitive “traffic light system” for: reagents, specimens and consumables



Graphical calibration curves for easy validation



Graphical evaluation of quality control



# Where intelligence meets relevance

## KRYPTOR compact PLUS Technical Specifications

<b>Instrument components</b>	KRYPTOR compact PLUS with Reader and Pipetting Module, external computer and Fluidic System
<b>Dimensions</b>	73 cm x 61 cm x 73 cm (W x H x D)
<b>Weight</b>	45 kg
<b>Specimen capacity</b>	Up to 64 in a maximum of 4 sample cassettes
<b>Specimen test tubes</b>	Primary and secondary test tubes, diameter 11 – 17 mm, variable from sample to sample special adapter for micro test tubes
<b>Specimen identification</b>	Barcode recognition and manual entry
<b>Specimen recognition/availability</b>	Barcode recognition, liquid-level monitoring, clot recognition
<b>Specimen volume</b>	10 – 70 µL (test specific)
<b>Operating modes</b>	Random access, batch, emergency (STAT)
<b>Reagent capacity</b>	Up to 8 different or identical kitboxes
<b>Reagent identification</b>	Barcode reader and manual entry
<b>Reagent recognition/availability</b>	Barcode recognition, liquid-level monitoring
<b>Calibration</b>	Reference curve shipped with reagents, calibration every 1 – 2 weeks, 1- and 2-point calibration (test specific)
<b>Specimen and reagent distribution</b>	1 heated, Teflon-coated steel needle; automatic wash step between different tests
<b>Reaction range</b>	37...40 °C, temperature monitored
<b>Reaction medium</b>	Specific reaction plate for 96 tests
<b>Signal generation</b>	Nitrogen laser, 120 µJ/pulse, 20 Hz, emission at 337 nm
<b>Signal detection</b>	Flexibility to use up to 4 different wavelengths, which enabled a high sensitivity of measurements
<b>Incubation time</b>	Between 9 and 59 minutes (test specific)
<b>Throughput</b>	Up to 60 tests per hour
<b>Online connection</b>	LIS interface; interface to prenatal screening risk calculation software products
<b>Quality control, statistics and information</b>	Comprehensive QC software package; control-area entry via barcode; continuously available, detailed reagent status

For latest updates  
on product list,  
please visit:  
[thermoscientific.com/  
kryptor](http://thermoscientific.com/kryptor)

## Highly innovative Thermo Scientific biomarkers available for KRYPTOR compact PLUS\*

		Article number
<b>Automated Immunoassay System</b>	<b>Thermo Scientific B-R-A-H-M-S KRYPTOR compact PLUS*</b>	106172
<b>Infectious Diseases</b>	B-R-A-H-M-S <b>PCT sensitive</b> KRYPTOR	825.050
<b>Respiratory/Pulmonary/ Cardiovascular Diseases</b>	B-R-A-H-M-S <b>Copeptin</b> KRYPTOR	828.050
	B-R-A-H-M-S <b>Copeptin us</b> KRYPTOR	802.050
	B-R-A-H-M-S <b>MR-proANP</b> KRYPTOR	819.050
	B-R-A-H-M-S <b>MR-proADM</b> KRYPTOR	829.050
<b>Endocrinology and Metabolic Disorders</b>	B-R-A-H-M-S <b>anti-Tg<sub>n</sub></b> KRYPTOR	830.075
	B-R-A-H-M-S <b>anti-TPO<sub>n</sub></b> KRYPTOR	852.075
	B-R-A-H-M-S <b>hTg</b> KRYPTOR (with Recovery)	833.075
	B-R-A-H-M-S <b>hTg sensitive</b> KRYPTOR (with Recovery)	soon available
	B-R-A-H-M-S <b>TRAK human</b> KRYPTOR	801.050
	B-R-A-H-M-S <b>CT-proAVP</b> KRYPTOR	804.050
<b>Cancer Diseases</b>	B-R-A-H-M-S <b>AFP</b> KRYPTOR	816.075
	B-R-A-H-M-S <b>CA 15-3</b> KRYPTOR	808.075
	B-R-A-H-M-S <b>CA 19-9</b> KRYPTOR	807.100
	B-R-A-H-M-S <b>CA 125 II</b> KRYPTOR	805.075
	B-R-A-H-M-S <b>CEA</b> KRYPTOR	817.100
	B-R-A-H-M-S <b>Chromogranin A</b> KRYPTOR	823.050
	B-R-A-H-M-S <b>CYFRA 21-1</b> KRYPTOR	811.050
	B-R-A-H-M-S <b>Free PSA</b> KRYPTOR	867.050
	B-R-A-H-M-S <b>Total PSA</b> KRYPTOR	810.100
	B-R-A-H-M-S <b>hCG+β</b> KRYPTOR	841.050
	B-R-A-H-M-S <b>NSE</b> KRYPTOR	821.050
	B-R-A-H-M-S <b>PAP</b> KRYPTOR	822.050
	B-R-A-H-M-S <b>SCC</b> KRYPTOR	812.050
	B-R-A-H-M-S <b>hTg</b> KRYPTOR (with Recovery)	833.075
	B-R-A-H-M-S <b>hTg sensitive</b> KRYPTOR (with Recovery)	soon available
	<b>Prenatal Screening</b>	B-R-A-H-M-S <b>AFP</b> KRYPTOR
B-R-A-H-M-S <b>Free βhCG</b> KRYPTOR		809.075
B-R-A-H-M-S <b>hCG+β</b> KRYPTOR		841.050
B-R-A-H-M-S <b>PAPP-A</b> KRYPTOR		866.075
B-R-A-H-M-S <b>PIGF</b> KRYPTOR		soon available
<b>Other Parameters</b>	B-R-A-H-M-S <b>Ferritin</b> KRYPTOR	814.050
	B-R-A-H-M-S <b>Osteocalcin</b> KRYPTOR	835.050

\* Please ask your local sales representative for availability in your specific country due to local regulations.



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**Clinical Diagnostics**

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