

THUNDERBOLT®
EIA ANALYZER

The ThunderBolt® is an innovative 2-plate, fully automated, open platform that is compact and cost efficient. The user-friendly and flexible software is capable of programming a broad range of protocols. The ThunderBolt® is available for both ELISA and Chemiluminescent (CLIA)* applications.



Please find a list of the available targets on the following pages.

* CLIA protocols require EIA+CLIA reader option

UNIQUE FEATURES	<p>Intelligent Racks System Architecture High Precision Micro-Syringe On-board Reader(s)</p> <p>Forced Convection Incubator On-board Camera Sliding Sample Tray Built-in Barcode Reader Orbital MTP Shaker Small Footprint</p>	<p>Automatic sample location management. Open, fully customizable. Aspirate 1uL with $\leq 3\%$ CV.. Spectrophotometer, or Spectrophotometer + Fluorescence Combo Reader.</p> <p>Evenly heats using forced air to eliminate “Edge Effect”. Probe-mounted camera allows remote troubleshooting. Easy loading and unloading of samples. Streamline loading and decrease sample tracking errors. Precise adherence to assay protocols. Fits on a 60cm deep standard laboratory bench.</p>
TECHNICAL SPECS	<p>Sample Capacity Reagent Positions</p> <p>Test Tube Size(s)</p> <p>MTP Positions Pre-dilution MTP Positions Well-Tracking Wash bottles Probe/Needle Dispense Volume Aspiration Volume Incubation Temperature Spectrophotometer</p> <p>Chemiluminescence Photomultiplier Tube (PMT)*</p> <p>Orbital MTP Shaker</p> <p>Power Supply Dimensions Weight CE Marked</p>	<p>192 patient sample positions 16 custom reagent positions (22-35mm diameter bottles accepted) Accepts standard 12, 13, 16 mm diameter, up to 100 mm tall (custom racks available) 2 positions 1 position Independent well tracking and timing 2 external wash bottle positions Single probe, dual needle Up to 300 μl 1 μl Room temperature to 40 °C 405, 450, 490, 550 and 630 nm wavelengths standard (custom available), 0 to 3.0 OD Detection type: glow, Spectral range: 300-500 nm, Dark count: 50 counts per second (standard), Measuring time: 200 ms (adjustable 1 to 1000 ms), Dynamic range: 6 decades (*optional configuration) Amplitude: 1 mm, Speed: Up to 900 RPM, 3 MTP (2 reaction, 1 predilution) 100-265V W: 64 cm, D: 57 cm, H: 45 cm, H (open): 91.5 cm 30 kg (65 lbs) Yes</p>
SOFTWARE SPECS	<p>Language Calculations</p> <p>Architecture Protocol Design LIS Integration User Interface</p>	<p>Multi-language support Point to point, linear regression, cubic spline, 4PL, 5 PL, Lin-Lin, Lin-Log, Log-Log representation Fully customizable Fully open and configurable test designer; custom reports Bi-directional, RS232, USB, TCP/IP MS Windows Graphical User Interface (Windows 7 or above)</p>

Virology

Description	Target
Adenovirus	IgA, IgG, IgM
Chikungunya Virus	IgG, IgM
COVID-19 (SARS-CoV-2)	IgA, IgG, IgM
COVID-19 (SARS-CoV-2)	Total Ab
COVID-19 (SARS-CoV-2) NP	IgA, IgG, IgM
COVID-19 (SARS-CoV-2) RBD	IgA, IgG, IgM
Cytomegalovirus (CMV) *	IgA, IgG, IgM
Dengue Virus	IgG, IgM
Dengue Virus NS1	
Epstein Barr Virus (EBV) EA-D	IgG, IgM
Epstein Barr Virus (EBV) EBNA-1	IgG, IgM
Epstein Barr Virus (EBV) VCA *	IgA, IgG, IgM
Hantavirus	IgG, IgM
Hepatitis E Virus (HEV)	IgG, IgM
Herpes Simplex Virus (HSV-1 + 2)	IgG, IgM
Mixed Ag	
Herpes Simplex Virus (HSV-2) Rec. Ag	IgG, IgM
Herpes Simplex Virus 1 (HSV-1) Rec. Ag	IgG, IgM
Influenza Virus A	IgA, IgG, IgM
Influenza Virus B	IgA, IgG, IgM
Japanese Encephalitis	IgG, IgM
Measles *	IgG, IgM
Mumps	IgA, IgG, IgM
Parainfluenza 1, 2, 3	IgA, IgG, IgM
Parvovirus B19	IgG, IgM
Respiratory Syncytial Virus	IgA, IgG, IgM
Rubella *	IgG, IgM
TBE (Tickborne Encephalitis)	Ig, IgG, IgM
TBE (Tickborne Encephalitis) FSME	IgG, IgM
Varicella-Zoster Virus (VZV)	IgA, IgG, IgM
West Nile Virus	IgG, IgM
Zika Virus	IgG, IgM

Parasitology

Description	Target
Ascaris Lumbricoides	IgG
Echinococcus (Hydatidosis)	IgG
Entamoeba Histolytica (Amebiasis)	IgG
Filariasis	
Leishmania Infantum (Leishmaniosis)	IgG
Malaria	
Schistosoma Mansoni (Bilharziosis)	IgG, IgM
Strongyloides	
Taenia Solium (Cysticercosis)	IgG
Toxocara Canis	IgA, IgG
Toxoplasma Gondii *	IgA, IgG, IgM
Trichinella Spiralis (Trichinosis)	IgG
Trypanozoma Cruzi (Chagas)	

Bacteriology

Description	Target
Bartonella	
Bordetella Parapertussis	IgA, IgG, IgM
Bordetella Pertussis	IgA, IgG, IgM
Bordetella Pertussis Toxin	IgA, IgG, IgM
Borrelia	IgM
Borrelia Afzelii	IgM
Borrelia Afzelii VisE	IgG
Borrelia B. Sensu Stricto	IgM
Borrelia B. Sensu Stricto VisE	IgG
Borrelia Burgdorferi	IgG, IgM
Borrelia Burgdorferi Rec. Ag + CSF	IgG, IgM
Borrelia Garinii	IgM
Borrelia Garinii VisE	IgG
Borrelia Rec.Ag	IgG, IgM
Borrelia VisE	IgG
Borrelia VisE/pepC10 + CSF	IgG, IgM
Brucella	IgG, IgM
Chlamydia	IgA, IgG, IgM
Chlamydia Pneumoniae	IgA, IgG, IgM
Chlamydia Pneumoniae Rec. Ag	IgA, IgG
Chlamydia Trachomatis	IgA, IgG, IgM
Clostridium Tetani Toxin (Tetanus)	IgG
Corynebacterium Diphtheriae Toxin	IgG
Coxiella Burneti (Q-Fever) Phase 1	IgG
Coxiella Burneti (Q-Fever) Phase 2	IgG, IgM
Helicobacter Pylori	IgA, IgG, IgM
Helicobacter Pylori p120 (CagA)	
Helicobacter Pylori Rec. Ag	IgA
Legionella Pneumophila	IgA, IgG, IgM
Leptospira	IgG, IgM
Mycoplasma Pneumoniae	IgA, IgG, IgM
Mycoplasma Pneumoniae Rec. Ag	IgA, IgG, IgM
Orientia Tsutsugamushi (Scrub Typhus)	IgG, IgM
PCP (Pneumococcal Capsular Polysaccharide)	IgG
Rickettsia Spotted Fever	IgG
Rickettsia Typhi	IgG, IgM
Treponema Pallidum	IgG, IgM, Total
Yersinia Enterocolitica	IgA, IgG, IgM

Mycology

Description	Target
ASCA (Saccharomyces cerevisiae)	IgA, IgG
Aspergillus Fumigatus	IgG, IgM
Aspergillus Galactomannan	
Candida Albicans	IgA, IgG, IgM

All kits are suitable for manual and automated use

*: Also available in avidity IgG

Autoimmune

Description	Target
21-OHab	
AChRab	
ANA	
ANCA	
Aquaporin 4 (AQP4)	
Cardiolipin	IgA, IgG, IgM
CCP	IgA, IgG
Centromere	
CH-50	
CIC-C1q	
CIC-C3d	
dsDNA	
ENA Profile	
ENA Screen	
Gliadin	IgA, IgG
Gliadin DA	IgA, IgG
Jo-1	
Milk	IgA, IgG, IgM
MPO (Myeloperoxidase)	IgG
PR-3	
Rheumatoid Factor (RF)	IgA, IgG, IgM
Scl-70	
SM	
SM/RNP	
SS-A (Ro)	
SS-A (Ro52)	
SS-A (Ro60)	
SS-B (La)	
Transglutaminase	IgA, IgG
U1RNP	

Hormone

Description	Target
17 beta-Estradiol	
17-OH Progesterone	
Aldosterone	
Androstenedione	
beta-hCG	
Cortisol	
DHEA-S	
Estriol (Total)	
FSH	
HGH	
LH	
Progesterone	
Prolactin	
Testosterone	
Testosterone (Free)	
Urinary Cortisol	

Thyroid

Description	Target
Anti-TG (TGA)	
FAST TRab	
T3 (Free)	
T3 (Total)	
T4 (Free)	
T4 (Total)	
TG (Thyroglobulin)	IgG, Total
TPO (Thyroid Peroxidase)	IgG, Total
TRAb	
TSH	

Diabetes Mellitus

Description	Target
3 Screen ICA	
C-Peptide	
GAD Ab	
IA2Ab	
Insulin	
ZnT8Ab	

Tumor

Description	Target
AFP	
CA 125	
CA 15-3	
CA 19-9	
CEA	
PSA (Total)	

Other

Description	Target
Ferritin	
IgE	

All kits are suitable for manual and automated use