



ELISA

ALTERNATIVES GUIDE

Think Outside The Well

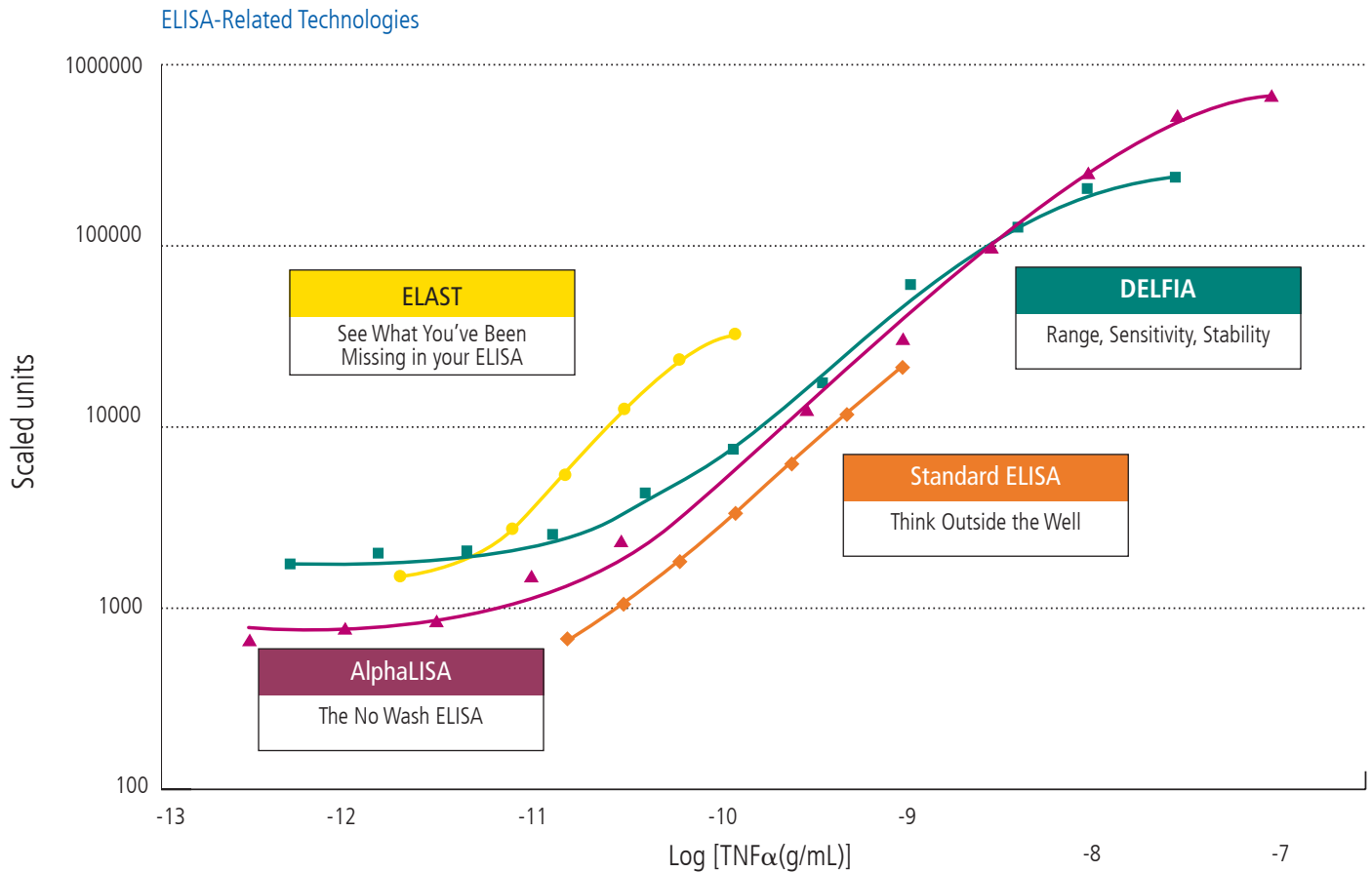
www.perkinelmer.com/elisa


PerkinElmer[®]
For the Better

ELISA JUST GOT EASIER

Since the introduction

of the radioimmunoassay (RIA) in the 1960's, immunoassay technology has been a critical piece of understanding concentrations of biological material in various sample media. In the 1970's, a quantum leap in technology occurred with the development of Enzyme-Linked Immunosorbent Assay (ELISA). ELISA and RIA are in widespread use today, and PerkinElmer continues to support these technologies with a variety of detection and automation platforms. PerkinElmer also offers several alternatives and ELISA-enhancing technologies – including AlphaLISA® no-wash immunoassays, DELFIA® with Europium labeling, and TSA™/ELAST™ signal amplification – to ensure that your immunoassays perform as sensitively, efficiently and accurately as your research requires.

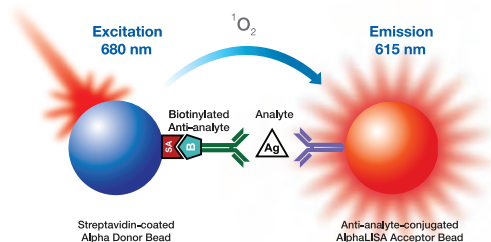


The graph compares PerkinElmer AlphaLISA, DELFIA and ELAST with standard ELISA, using the same antibodies and TNFα as antigen.

- AlphaLISA offers the greatest dynamic range and sensitivity, with almost two logs more signal at the lower detection limit than ELISA.
- DELFIA has much broader dynamic range than ELISA.
- ELAST dramatically increases signal and sensitivity of ELISA.

PERKINELMER OFFERS ALTERNATIVES TO TRADITIONAL **ELISA**

AlphaLISA: The No Wash ELISA



1. The Alpha Donor bead (blue) is coated with streptavidin which captures the biotinylated antibody.
2. The Acceptor bead (red) is coated with analyte-specific antibody.
3. The beads are brought into proximity through binding to the analyte.
4. When excited by laser at 680nm, the Alpha Donor bead releases singlet oxygen which travels to the nearby Acceptor bead where it induces emission of light.

The AlphaLISA Toolbox: ready-to-conjugate AlphaLISA beads for unlimited assay possibilities.

Choose components to build your own AlphaLISA assay:

Alpha Donor beads

- Streptavidin
- Nickel Chelate
- Glutathione
- Anti-mouse IgG (Fc-specific)
- Anti-goat IgG (Fc-specific)
- Anti-rat IgG (Fc-specific)

AlphaLISA

Acceptor beads

- Protein A
- Protein G
- Nickel Chelate
- Glutathione
- Anti-DIG
- Anti-FLAG
- Anti-GST
- Anti-c-myc

AlphaLISA buffers

- Anti-human IgG (Fc-specific)
- Anti-rabbit IgG (Fc-specific)

BENEFITS

- Save Sample: better sensitivity than ELISA
- Save Time: no wash steps to slow your research
- Save Effort: homogeneous assay all in one well

When to Use:

Moderate-high throughput, precious samples, serum or lysates

Detection and Automation:

EnVision[®], EnSpire[™], JANUS[®]

Microplates:

AlphaPlate[™], OptiPlate[™], CulturPlate[™] 1/2 Area Plate

AlphaScreen[®] SureFire[®] kits: the benefits of AlphaLISA for endogenous cellular kinases

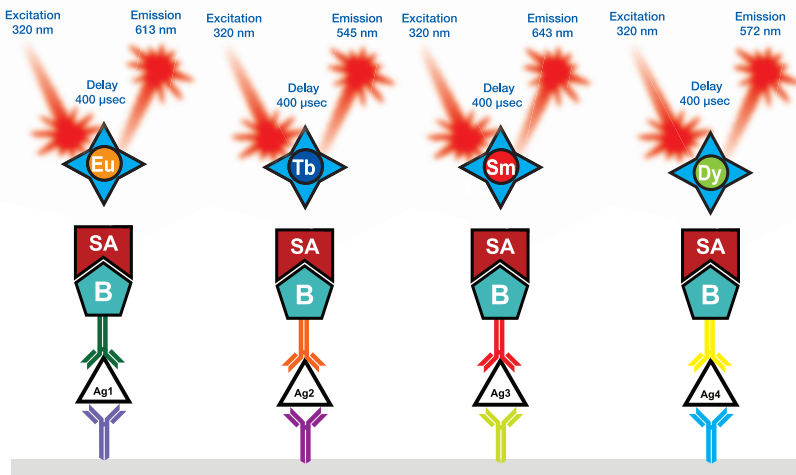
- Measure over-expressed and endogenous phosphorylated kinases
- Validated on many different cell lines
- Easy to miniaturize and automate
- Culture cells and measure kinases in a single well

AlphaLISA kits are available for research in many therapeutic areas:

Angiogenesis	TNF α			
	VEGF			
	EPO			
Biologics	IgG			
	CHO-P			
	NSO-P			
Cancer	EGF-R	PSA		
	EPO	TNF α		
Cardiovascular	EPO			
Inflammation	COMP	IFN γ	IL1 β	IL6
	G-CSF	IL10	IL2	IL8
	GM-CSF	IL17	IL3	TNF α
	Adiponectin		Insulin	
Metabolic	GH		Leptin	
	GLP-1		Prolactin	
Neurodegeneration	Amyloid β 1-40			
	Amyloid β 1-42			

CHOOSE FROM AMONG A BROAD RANGE OF ELISA TECHNOLOGIES

DELFLIA: Range, Sensitivity, Stability



BENEFITS

- Wide dynamic range avoids additional dilutions
- A well-proven technology with many years of validation
- Multiplex up to four analytes per well
- Stable signal allows delayed reading

When to Use:

Unknown sample concentration, limited reader availability, multiple analytes

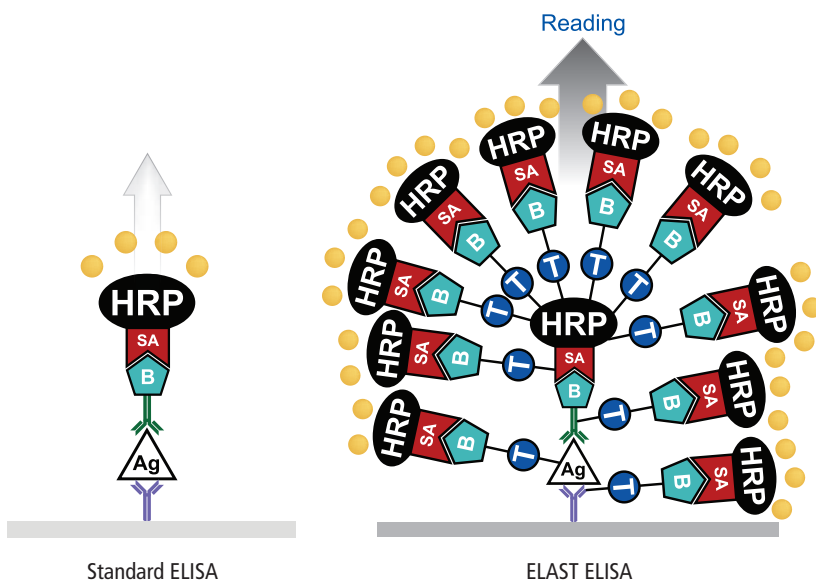
Detection:

EnVision, VICTOR™ X

Microplates:

DELFLIA Plate, OptiPlate

ELAST: See What You've Been Missing in your ELISA



BENEFITS

- Higher sensitivity helps save expensive antibodies and precious sample
- Easily integrates into your existing ELISA
- Amplifies your ELISA signal 8-32 fold
- Powered by PerkinElmer's proprietary TSA technology

When to Use:

Complex samples, precious sample or antibodies low signal from ELISA

Detection:

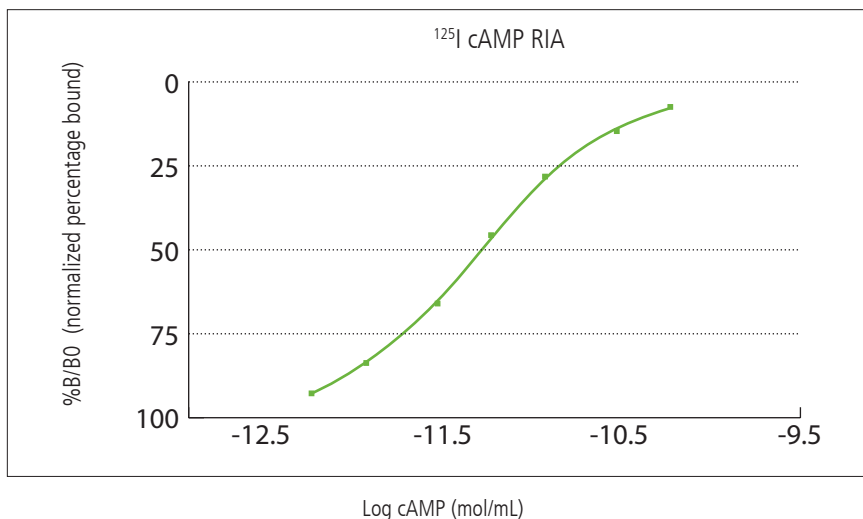
VICTOR X, EnSpire

Microplates:

Strip Well Plate, SpectraPlate™

NEN Radioimmunoassays: The Gold Standard

NEN® Radioimmunoassay Assay Performance



BENEFITS

- The original immunoassay
- Legendary NEN quality, safety and consistency
- The Gold Standard for sensitivity

When to Use:

Low sample concentration, existing radiochemical workflow

Detection:

MicroBeta²™, TopCount®, Tri-Carb®, WIZARD®

Microplates:

NEN Vials, FlashPlate®

Better Microplates Mean Better Results

Microplate	Assay Technology	Available Formats
AlphaPlate	AlphaLISA, AlphaScreen	384, 1536
OptiPlate	AlphaLISA, AlphaScreen, DELFIA, ELAST, ELISA	96, 384, 1536
SpectraPlate	ELAST, ELISA	96, 384, 1536
Strip-well Plate	DELFLIA, ELAST, ELISA	96 (8 strips x 12 wells)
DELFLIA Yellow Plate	DELFLIA	96
ProxiPlate™	AlphaLISA, AlphaScreen	96, 384
½ Area Plate	AlphaLISA, AlphaScreen	96
CulturPlate	AlphaLISA, AlphaScreen	96, 384, 1536
FlashPlate	Radioimmunoassay	96, 384



PerkinElmer offers a complete line of high-quality microplates for every immunoassay application. Don't trust your results to generic microplates; use microplates specifically developed and validated for PerkinElmer assay technologies.

For microplates validated for use in these assay platforms, visit: www.perkinelmer.com/microplates

DETECTION AND AUTOMATION FOR **ELISA** AND ALTERNATIVES

EnVision Multilabel
Plate Readers



Fast, sensitive and versatile benchtop readers for AlphaScreen, luminescence flash and glow, fluorescence intensity, time-resolved fluorescence, fluorescence polarization, and UV/absorbance.

EnSpire Alpha or
EnSpire AlphaPLUS
Multilabel Plate Readers



High performance and affordable benchtop monochromator and Alpha readers for fluorescence, UV/absorbance and AlphaScreen technology.

JANUS Automated
Workstations



Automation and liquid handling of complex assays, from sample preparation to full automation through detection and analysis.

VICTOR X Multilabel
Plate Readers



Versatile, high performance filter based reader for glow luminescence, fluorescence intensity, time-resolved fluorescence, fluorescence polarization, UV/absorbance.

Tri-Carb Liquid
Scintillation Analyzers



Liquid and dry scintillation and luminescence methods for research including radioimmunoassay (RIA), and more.

WIZARD Automatic
Gamma Counters



Gamma counting for radioimmunoassays (RIA), chromium (^{51}Cr) release studies, and more.

MicroBeta² or MicroBeta²
LumiJET Plate Counters



Liquid scintillation analyzers for alpha, beta and gamma radioactivity methods including radioimmunoassay (RIA), and more.

TopCount Liquid Scintillation
and Luminescence Counters



Liquid and dry scintillation, flash and glow luminescence methods for research, including radioimmunoassay (RIA), and more.

ONPOINT REAGENT SERVICES: WE DEVELOP, YOU DISCOVER

Success Depends on Your

most valuable resource: your scientists. But when they have to develop their own assays and reagents, they are able to devote less time to investigating and innovating. That's why we've developed OnPoint® Reagent Services – the complete solution for accelerating and simplifying life-science research and drug discovery.



OnPoint Services for ELISA include:

- **ELISA Conversion:** We can convert your existing ELISA to a fully optimized assay using one of our ELISA alternative technologies.
- **Custom Labeling:** Get your peptide, antibody, or protein substrate or nucleotide custom labeled so you can develop the assay you need.
- **Microplate Coating Service:** Our extensive experience with microplate coating technology allows us to be as flexible as your needs require.
- **Custom Radiosynthesis & Radiolabeling Services:** PerkinElmer's experienced chemists will work with you, scientist to scientist, to design and prepare your radiochemical.

Ordering Information

DELFIA plates and reagents

Cat. No.	Description	Package
AAAND-0001	DELFLIA Yellow Plate, 96-well	60 plates
AAAND-0005	DELFLIA Yellow Plate, 96-well	60 plates
1244-360	DELFLIA Eu-labeled streptavidin	250 µg
AD0021	DELFLIA Assay Buffer	250 mL
1244-111	DELFLIA Wash Concentrate	250 mL
1244-114	DELFLIA Enhancement Solution	50 mL
4013-0010	DELFLIA Inducer	250 mL

Ordering information continued on next page.

ELAST and p24 ELISA kits

Product	Description	Product No.
ELISA Amplification System	Contains reagents to amplify signals in ten 96-well ELISA microplates	NEP116001EA
ELAST Evaluation Size	Contains reagents to amplify signals in one 96-well ELISA microplate	NEP116E001EA
ELAST ELISA Amplification System	For use with the Alliance HIV-1 p24 Antigen ELISA Kit	NEP116VL001PK
Alliance HIV-1 p24 Antigen ELISA Kit	One 96-well plate and reagents for 96 tests	NEK050001KT

Radioimmunoassay kits

Product	Description	Product No.
11-Dehydrothromboxane B2 [¹²⁵ I]-RIA Kit	250 assay tubes	NEK042A001KT
6-Keto-Prostaglandin F1α [¹²⁵ I]-RIA Kit	125 assay tubes	NEK025001KT
Cyclic AMP [¹²⁵ I]-Tracer Plus Carrier Serum	100 assay tubes	NEK035001EA
Cyclic AMP [¹²⁵ I]-Tracer RIA Kit	200 assay tubes	NEK033001KT
Cyclic GMP [¹²⁵ I]-Tracer RIA Kit	200 assay tubes	NEX133001KT
Inositol 1, 4, 5-trisphosphate, [³ H]-Radioreceptor Assay Kit	192 assay tubes	NEK064001KT
Leukotriene B4 [³ H]-RIA Kit	250 assay tubes	NEK037A001KT
Prostaglandin E2 [¹²⁵ I]-RIA Kit	125 assay tubes	NEK020001KT
Thromboxane B2 [¹²⁵ I]-RIA Kit	125 assay tubes	NEK024001KT

Ordering information continued on next page.

No-wash AlphaLISA Research Immunoassay Kits

AlphaLISA immunoassay kits are for research purposes only and are not intended for diagnostic applications. Each Kit Contains: AlphaLISA Acceptor beads coated with anti-analyte antibody 1, streptavidin-coated Alpha Donor beads, biotinylated anti-analyte antibody 2, lyophilized analyte and AlphaLISA buffer (10X). Buffer and lyophilized analyte can be ordered separately.

Product Description	Size	Part No.
Human Adiponectin Kit, New!	500 assay points	AL209C
	5,000 assay points	AL209F
Human Adiponectin, Lyophilized	1 µg	AL209S
Human Amyloid β 1-40 Immunoassay Kit	500 assay points	AL202C
	5,000 assay points	AL202F
Human Amyloid β 1-40, Lyophilized	0.3 µg	AL202S
Human Amyloid β 1-42 Immunoassay Kit	500 assay points	AL203C
	5,000 assay points	AL203F
Human Amyloid β 1-42, Lyophilized	1 µg	AL203S
CHO-P Kit, New!	500 assay points	AL210C
	5,000 assay points	AL210F
CHO-P, Lyophilized	0.5 µg	AL210S
Human COMP Kit, New!	500 assay point	AL211C
	5,000 assay points	AL211F
Human COMP, Lyophilized	1.5 µg	AL211S
Human EGFR Kit, New!	500 assay points	AL212C
	5,000 assay points	AL212F
Human EGFR, Lyophilized	1µg	AL212S
Human EPO Immunoassay Kit	500 assay points	AL206C
	5,000 assay points	AL206F
Human EPO, Lyophilized	30 IU	AL206S
Human G-CSF Kit, New!	500 assay points	AL213C
	5,000 assay points	AL213F
Human G-CSF Kit, Lyophilized	1 µg	AL213S
Human GH Kit, New!	500 assay points	AL214C
	5,000 assay points	AL214F
Human GH, Lyophilized	0.3 µg	AL214S
Human GLP-1 (7-36 Amide) Kit, New!	500 assay points	AL215C
	5,000 assay points	AL215F
Human GLP-1 (7-36 Amide), Lyophilized	0.1 µg	AL215S
Human GM-CSF Kit, New!	500 assay points	AL216C
	5,000 assay points	AL216F
Human GM-CSF, Lyophilized	0.03 µg	AL216S
HIV-p24 Immunoassay Kit	500 assay points	AL207C
	5,000 assay points	AL207F
HIV-p24, Lyophilized	10 µg	AL207S
Human IFN-γ Kit, New!	500 assay points	AL217C
	5,000 assay points	AL217F
Human IFN-γ, Lyophilized	0.3 µg	AL217S
Human IgG Immunoassay Kit	500 assay points	AL205C
	5,000 assay points	AL205F
Human IgG, Lyophilized	3 µg	AL205S

Product Description	Size	Part No.
Human IL2 Kit, New!	500 assay points	AL221C
	5,000 assay points	AL221F
Human IL2, Lyophilized	0.3 µg	AL221S
Human IL3 Kit, New!	500 assay points	AL222C
	5,000 assay points	AL222F
Human IL3, Lyophilized	0.3 µg	AL222S
Human IL6 Kit, New!	500 assay points	AL223C
	5,000 assay points	AL223F
Human IL6, Lyophilized	0.1 µg	AL223S
Human IL8 Kit, New!	500 assay points	AL224C
	5,000 assay points	AL224F
Human IL8, Lyophilized	0.1 µg	AL224S
Human IL10 Kit, New!	500 assay points	AL218C
	5,000 assay points	AL218F
Human IL10, Lyophilized	0.3 µg	AL218S
Human IL17 Kit, New!	500 assay points	AL219C
	5,000 assay points	AL219F
Human IL17, Lyophilized	1 µg	AL219S
Human IL1β Kit, New!	500 assay points	AL220C
	5,000 assay points	AL220F
Human IL1β, Lyophilized	0.1 µg	AL220S
Human Insulin Immunoassay Kit	500 assay points	AL204C
	5,000 assay points	AL204F
Human Insulin, Lyophilized	0.01 IU	AL204S
Human Leptin Kit, New!	500 assay points	AL225C
	5,000 assay points	AL225F
Human Leptin, Lyophilized	0.3 µg	AL225S
NSO-P Kit, New!	500 assay points	AL226C
	5,000 assay points	AL226F
NSO-P, Lyophilized	1 µg	AL226S
Human Prolactin Kit, New!	500 assay points	AL227C
	5,000 assay points	AL227F
Human Prolactin, Lyophilized	1 µg	AL227S
Human PSA Kit, New!	500 assay points	AL228C
	5,000 assay points	AL228F
Human PSA, Lyophilized	3 µg	AL228S
Human TNFα Immunoassay Kit	500 assay points	AL208C
	5,000 assay points	AL208F
Human TNFα, Lyophilized	0.1 µg	AL208S
Human VEGF Immunoassay Kit	500 assay points	AL201C
	5,000 assay points	AL201F
Human VEGF, Lyophilized	0.3 µg	AL201S

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