



bioauxilium

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# THUNDER™ TR-FRET Human Cytokine Assay Kits

## THE REAL ALTERNATIVE TO ELISA AND EXISTING TR-FRET ASSAYS

Bioauxilium has expanded its line of THUNDER™ TR-FRET cell-based kits with the launch of assays designed to quantitate key pro-inflammatory human cytokines in cell supernatants in a simple, quick, reproducible and robust manner. The new kits contain matched labeled-antibody pairs and an optimized assay buffer to develop a TR-FRET immunoassay using the recommended standard, which must be purchased separately. They offer an economical and versatile alternative to buying complete kits.

THUNDER™ cytokine assays have a no-wash protocol with a single incubation step, which provides significant time savings and ease-of-use when compared to lengthy and multi-step ELISAs. In addition to flexible kit sizes, custom multi-target assay kits are also available, allowing customers to select analyte combinations specific for their research. All THUNDER™ kits are developed in-house and subjected to a stringent validation process to ensure assay performance.

### THUNDER™ VERSUS ELISA ASSAY WORKFLOW



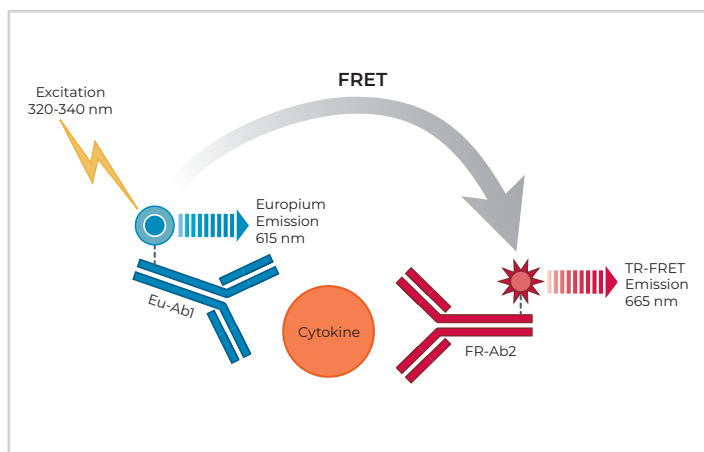
### FEATURES AND BENEFITS

The THUNDER™ assay platform offers significant advantages over ELISA and other TR-FRET technologies.

What THUNDER™ Assay Kits offer	What it means for you
Enhanced TR-FRET technology and high-performing antibodies	High sensitivity (only 15 µL of sample), specificity and reproducibility
No-wash, single reagent addition protocol	Minimal risk of error, much better reproducibility, faster time-to-results
Highly stable Europium chelate	Compatible with culture media containing phenol red
Long signal stability	Flexibility in reading times
No biotinylated antibodies	Compatible with high-biotin culture media
Fully validated with cell supernatants	Guaranteed detection of endogenous protein
No requirement for potassium fluoride addition	Not toxic to cells. Compatible with sequential assays (e.g., cell viability)
Cost-effective	Easier access to the powerful TR-FRET technology
Flexible kit sizes	Suitable for both small experiments and screening

## HOW DOES IT WORK?

The THUNDER™ cytokine assays are homogeneous sandwich immunoassays based on Bioauxilium's enhanced TR-FRET technology. The analyte is captured by an antibody labeled to a Europium chelate donor, and a second antibody labeled to a far-red acceptor fluorophore. The formation of the immunocomplex in solution brings the donor and acceptor into close proximity. Upon excitation at 320 or 340 nm, energy is transferred from the donor Europium chelate to the acceptor fluorophore. This results in the emission by the acceptor of a long-lived TR-FRET signal at 665 nm, which is proportional to the concentration of cytokine in the sample.



## ASSAY SPECIFICATIONS

	Human IFN $\gamma$	Human IL-1 $\beta$	Human IL-2	Human IL-6	Human IL-8	Human TNF $\alpha$
Hands-on time	15 min					
Incubation time (hour)	2	2	2	1	1	2
Detection range (pg/mL)	21-30,000	32-10,000	10-30,000	35-30,000	15-10,000	13-30,000
Detection limit (pg/mL)	21	32	10	35	15	13

## ORDERING INFORMATION

	KIT SIZE (points <sup>1</sup> )					Required standard <sup>3</sup>
	100 points <sup>1</sup>	500 points	2500 points	5000 points	10 000 points	
Human IFN $\gamma$	KIT-IFNG-100	KIT-IFNG-500	KIT-IFNG-2500	KIT-IFNG-5000	KIT-IFNG-10000	R&D Systems® 285-IF-100
Human IL-1 $\beta$	KIT-IL1B-100	KIT-IL1B-500	KIT-IL1B-2500	KIT-IL1B-5000	KIT-IL1B-10000	R&D Systems® 201-LB
Human IL-2	KIT-IL2-100	KIT-IL2-500	KIT-IL2-2500	KIT-IL2-5000	KIT-IL2-10000	R&D Systems® 202-IL
Human IL-6	KIT-IL6-100	KIT-IL6-500	KIT-IL6-2500	KIT-IL6-5000	KIT-IL6-10000	ProSpec CYT-213
Human IL-8	KIT-IL8-100	KIT-IL8-500	KIT-IL8-2500	KIT-IL8-5000	KIT-8-10000	ProSpec CHM-327
Human TNF $\alpha$	KIT-TNFA-100	KIT-TNFA-500	KIT-TNFA-2500	KIT-TNFA-5000	KIT-TNFA-10000	R&D Systems® 210-TA
Custom 3-target kit <sup>2</sup>	KIT-3BIOM-300 (300 points; 100 points for each target)					
Custom 5-target kit <sup>2</sup>	KIT-5BIOM-500 (500 points; 100 points for each target)					

<sup>1</sup>A point is an assay well; based on a total assay volume of 20  $\mu$ L in a low-volume 384-well plate.

<sup>2</sup>Customized TR-FRET assay kit that combines the reagents necessary for the quantitative detection of 3 or 5 biomarkers in cell culture supernatants. <sup>3</sup>The standard is not included in the kit.


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