bioauxilium

BETTER TOOLS. REAL DISCOVERIES.

Thunder™ Cell Signaling Assays

NOW, YOU HAVE A REAL ALTERNATIVE!

HIGH-QUALITY

FULLY-VALIDATED

READY-TO-USE

AFFORDABLE

We have leveraged our unique expertise in reagent and assay development to develop a new line of **high-quality**, **fully-validated** yet **affordable** kits based on an improved Time-resolved Förster Resonance Energy Transfer (TR-FRET) technology. TR-FRET is a homogeneous fluorescence detection technology that does not require any wash or separation steps such as those required with ELISA. The **ready-to-use** Thunder™ kits enable the sensitive, simple and rapid measurement of low amounts of specific intracellular phosphorylated and total proteins in cell lysates from adherent or suspension cells.

DISCOVER THE ALTERNATIVE

BETTER COMPONENTS

- The best validated antibodies were selected to guarantee specificity for the target protein.
- Many donor/acceptor fluorophores were tested to select the optimal pair providing the best TR-FRET signal-to-background.
- Extensive testing of labeled antibody pairs using optimized lysis buffers followed by assay optimization were conducted to ensure specificity, reproducibility and optimal TR-FRET assay performance.

RIGOROUS VALIDATION

- All Thunder™ kits are subjected to a stringent validation process using lysates from cells that are treated with pathway-specific activators and inhibitors to further confirm target specificity.
- Data relevance policy: validation data are included in the accompanying Technical Data Sheets.

CONFIRMED LOT-TO-LOT CONSISTENCY

- All Thunder™ kits are developed, validated and manufactured in-house, ensuring lot-to-lot consistency and results you can trust.
- Lot-to-lot consistency is verified using a functional quality control assay where each new lot is compared to the previous lot.
- Thunder™ kits are released only if they meet pre-defined product specifications.

AFFORDABILITY

- A superior and cost-effective alternative to ELISA and proprietary TR-FRET technologies.
- Thunder™ is an affordable cell-based assay platform that provides easy access to the TR-FRET technology for all researchers looking to quantify low amounts of endogenous proteins in cells.

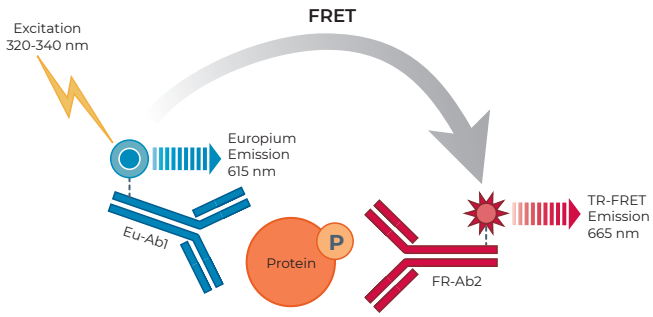
EXPERT TECHNICAL SUPPORT

- Timely and pertinent technical support by the scientists who designed, developed and validated the assays.

HOW DOES IT WORK?

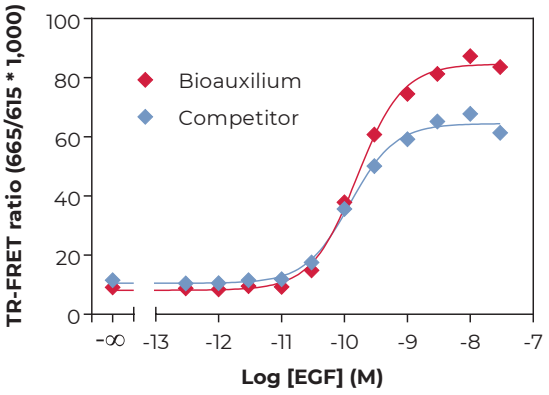
Our assay kits are all based on the traditional immuno-assay sandwich principle. However, they use a streamlined protocol wherein the antibody-target sandwich complex is formed in solution in a single addition and incubation step, without any wash steps. This protocol dramatically decreases hands-on time and enables faster time to results.

Cells are lyzed using an optimized lysis buffer provided in all kits. A pair of antibodies specific for the target protein is then added to the lysate sample. One antibody is labeled with a donor fluorophore (a Europium chelate), while the second antibody is labeled with an acceptor fluorophore (a far-red dye). Upon excitation of the Europium chelate at 320 or 340 nm, energy is transferred from the donor to the acceptor fluorophore if they are sufficiently close (within 10 nm) for FRET. This results in the emission by the acceptor of a TR-FRET signal at 665 nm.



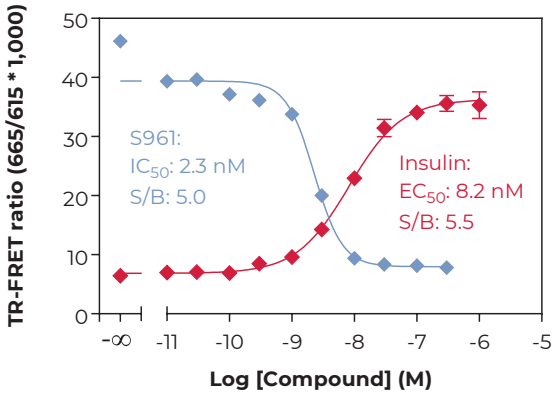
TYPICAL VALIDATION DATA

STIMULATION OF PHOSPHO-ERK1/2 (T202/Y204) IN HEK293 CELLS

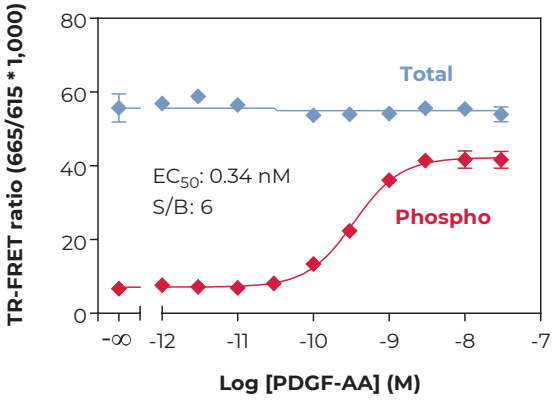


	S/B	EC_{50} (nM)
BioAuxilium kit	9.5	0.16
Competitor kit	5.9	0.12

MODULATION OF PHOSPHO-IRβ (Y1150/Y1151) IN B LYMPHOCYTES



STIMULATION OF PHOSPHO-AKT PAN (S473) IN NIH3T3 CELLS



DISCOVER THE BENEFITS

GENERATE TRUSTHWORTHY DATA

All kits include a positive control lysate, and are validated using relevant cellular models.

CONSULT RELEVANT INFORMATION BEFORE YOU PURCHASE

Our comprehensive and data-rich technical data sheets will help you make a sound purchase decision.

REDUCE HANDS-ON TIME AND ASSAY COMPLEXITY

All our kits offer an easy and standardized no-wash, one-step addition protocol that takes only 5 minutes.

HIGH SENSITIVITY

Our kits require a small sample volume (15 µL) in a miniaturized assay format (20 µL).

CHOOSE THE FORMAT OPTION THAT SUITS YOUR NEEDS

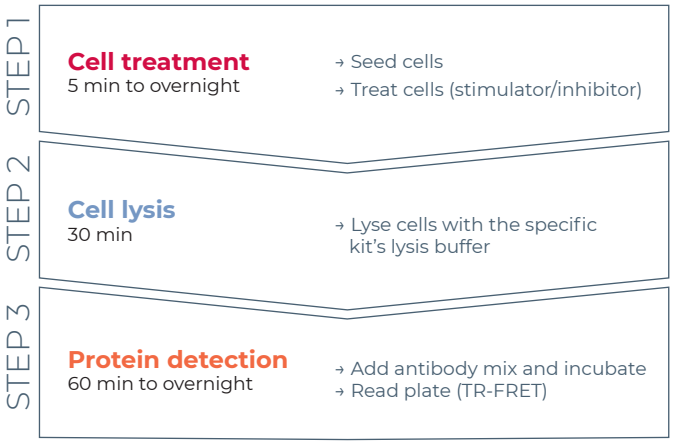
We offer several kit sizes: 100, 500, 2,500 and 5,000 points.

NO SPECIALIZED EQUIPMENT NEEDED

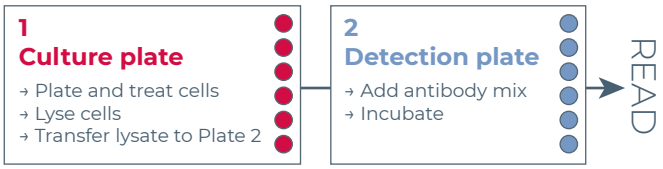
Most TR-FRET compatible microplate readers can be used for detection.

ASSAY WORKFLOW

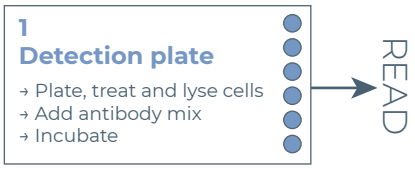
All it takes is 3 simple steps to complete the workflow of all our TR-FRET Cell Signaling Assays.



Assays can be run using a 2-plate (transfer) protocol:



Or a 1-plate (all-in-one-well) protocol:



Assays are optimized to be run in 96-well or 384-well plates using the same total volume (20 µL).

KIT OPTIONS

1 PHOSPHO-PROTEIN

Measure the relative amounts of a specific phosphorylated target protein.

2 TOTAL-PROTEIN

Measure the relative amounts of a target protein regardless of its phosphorylation status. These kits can be used to monitor protein expression levels and for normalization purposes.

3 PHOSPHO + TOTAL PROTEIN

Provide a novel opportunity to measure matched phosphorylated and total proteins from separate wells in the same plate.

KIT COMPONENTS

Each kit includes the essential reagents required for measuring the intracellular target protein in cell lysates.

- EUROPIUM-LABELED ANTIBODY
- ACCEPTOR-LABELED ANTIBODY
- OPTIMIZED LYSIS BUFFER
- POSITIVE CONTROL CELL LYSATE
- DETECTION BUFFER

KIT SIZES

PHOSPHO- AND TOTAL-PROTEIN KITS
Available in four sizes for higher flexibility: 100, 500, 2,500 and 5,000 assay points.

PHOSPHO + TOTAL-PROTEIN KITS
Available in the 500 points format only.

CUSTOM ASSAY DEVELOPMENT

For all your custom development needs, we offer extensive custom assay and product development services. With more than 100 TR-FRET assays developed in the last four years, rest assured that we can take up any project.

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