

Fluorescence resonance energy transfer (FRET) technology detects the proximity between a donor fluorophore and an acceptor fluorophore within a distance of 1-10 nm. Lanthanide ions, such as terbium or europium, bound to a chelator, are commonly used as donor fluorophores in time-resolved (TR)-FRET assays. The long fluorescence lifetime of lanthanides enables delayed detection to eliminate interferences from short-lived background signals that significantly improves sensitivity and specificity. Both donors and acceptors can be directly or indirectly modified on substances of interest, offering versatile assay formats capable of detecting molecular interactions, post-translational modifications, enzyme activity, quantification of analytes, and other applications.

TR-FRET provides homogeneous detection (no wash step), sensitive and stable readouts, high reproducibility, and high throughput capacity. It is widely utilized in drug development for hit and lead discovery, and with high potential in biomarker quantification.

The RELAY^{TR} FRET Platform

Empowered by terbium (Tb) and europium (Eu) chelate-based donors, along with fluorescein and Cy5-based acceptors that are covalently conjugated onto various targets *via* free thiols or amines. We offer both ready-to-use reagents and customized CRO services.

Reagents – A Toolbox for Versatile TR-FRET Assays and Degradable Drug Development

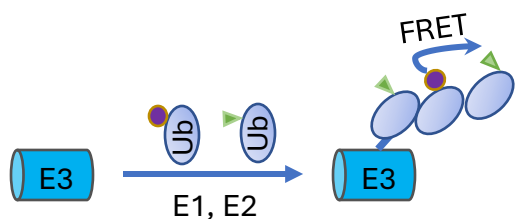
We provide premade Tb, Eu, fluorescein, or Cy5-labeled proteins and antibodies, including ubiquitin, protein G, and commonly used tag antibodies (HA, GST, HIS, or DYKDDDDK), as well as assay kits. These reagents can be utilized in high throughput assays to profile ubiquitin-conjugating enzymes (E2s), assess E3 ubiquitin ligase activity, screen and validate degrader drugs, study protein-protein interactions, and more. Please refer to the product list on the next page for more details.

Services – Customized Reagent Development and Assay Optimization

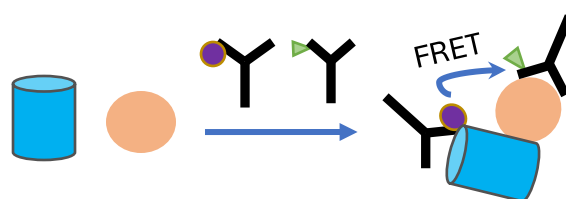
Our CRO services are tailored to meet specific customer needs in reagent production and assay development. We offer protein/peptide production, Tb/Eu/fluorescein/Cy5 labeling, assay optimization in 384-well format, and comprehensive technical support

Exemplary TR-FRET Assays

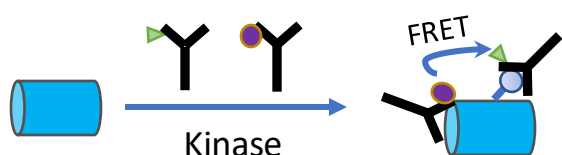
I) Ubiquitin ligase autoubiquitination



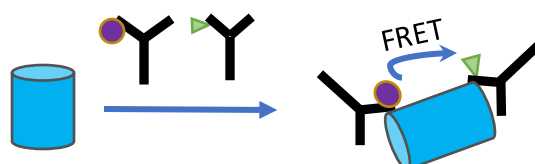
II) Molecular interaction



III) Protein phosphorylation



IV) Analyte quantification



TR-FRET Product List

CATALOG #	PRODUCT NAME	PACKING SIZE
T1001	RELAY ^{TR} Ubiquitination Buffer (10X)	5 ml; 30 ml
T1501	ATP solution (0.5M, neutral pH)	0.1 ml; 0.5 ml
E1140; E1141	Biotin-Ubiquitin	50 µg; 1 mg
E1160; E1161	TAMRA-Ubiquitin	50 µg; 1 mg
E1300	6xHis-Ubiquitin	1 mg; 5 mg
E1400	HA-Ubiquitin	1 mg; 5 mg
T2001	Terbium-Ubiquitin	5 µg; 25 µg, 100 µg
T2201	Fluorescein-Ubiquitin	100 µg; 1 mg
T2501	RELAY ^{TR} Terbium/Fluorescein Ubiquitin Mix (100X)	200; 2K; 5K Rxns
T3001	Europium-Ubiquitin	5 µg; 25 µg, 100 µg
T3201	Cy5-Ubiquitin	100 µg; 1 mg
T3501	RELAY ^{TR} Europium/Cy5 Ubiquitin Mix (100X)	200; 2K; 5K Rxns
T4000	RELAY ^{TR} Ubiquitin Ligase Activity Assay Kit	400 Rxns
T4010	RELAY ^{TR} ITCH Activity Assay Kit	400 Rxns
T4020	RELAY ^{TR} UbE3A Activity Assay Kit	400 Rxns
T4030	RELAY ^{TR} CHIP Activity Assay Kit	400 Rxns
T5000	RELAY ^{TR} Ubiquitin E2 Profiling Kit	50 Rxns/E2; 23 E2s
T5210	RELAY ^{TR} K48 Linkage-specific Deubiquitinase Assay Kit	200 Rnxs
T6010	Fluorescein-Anti-6XHIS Mouse mAb	50 µg
T6020	Fluorescein-Anti-GST Mouse mAb	50 µg
T6030	Fluorescein-Anti-HA Mouse mAb	50 µg
T6040	Fluorescein-Anti-DYKDDDDK Mouse mAb	50 µg
T6210	Terbium-Anti-6XHIS Mouse mAb	10 µg; 50 µg, 200 µg
T6220	Terbium-Anti-GST Mouse mAb	10 µg; 50 µg, 200 µg
T6030	Terbium-Anti-HA Mouse mAb	10 µg; 50 µg, 200 µg
T6240	Terbium-Anti-DYKDDDDK Mouse mAb	10 µg; 50 µg, 200 µg
T6610	Europium-Anti-6XHIS Mouse mAb	10 µg; 50 µg, 200 µg
T6620	Europium-Anti-GST Mouse mAb	10 µg; 50 µg, 200 µg
T6630	Europium-Anti-HA Mouse mAb	10 µg; 50 µg, 200 µg
T6640	Europium-Anti-DYKDDDDK Mouse mAb	10 µg; 50 µg, 200 µg
T7010	Fluorescein-Protein G	10 µg; 50 µg, 200 µg
T7020	Cy5-Protein G	10 µg; 50 µg, 200 µg
T7210	Terbium-Protein G	10 µg; 50 µg, 200 µg
T7220	Europium-Protein G	10 µg; 50 µg, 200 µg