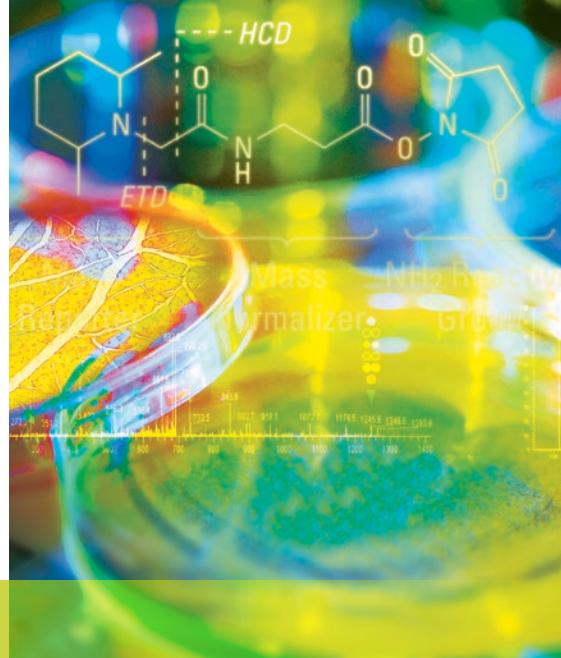


the power of higher plexing

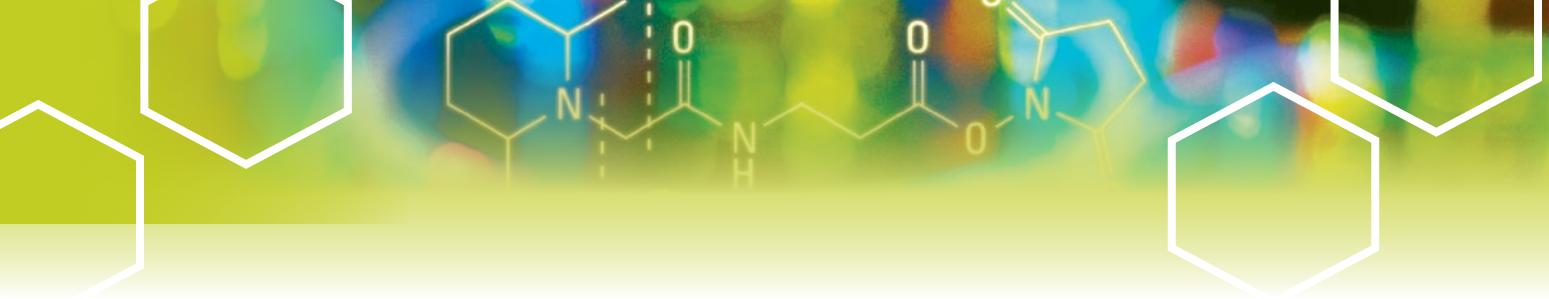
Thermo Scientific TMT10plex Reagents

Amine-reactive, 10-plex isobaric tag reagents. The Thermo Scientific™ Tandem Mass Tag™ Reagents are specially designed to enable identification and quantitation of proteins in different samples using tandem mass spectrometry (MS). Thermo Scientific™ TMT10plex™ Label Reagents share an identical structure with Thermo Scientific™ TMTzero™, TMTduplex™ and TMTsixplex™ Reagents but contain different numbers and combinations of ¹³C and ¹⁵N isotopes in the mass reporter. The different isotopes result in a 10-plex set of tags that have mass differences in the reporter that can be detected using high-resolution Thermo Scientific™ Orbitrap™ Mass Spectrometers.



Highlights:

- **Powerful** – concurrent MS analysis of multiple samples increases sample throughput and enables relative quantitation of up to 10 different samples derived from cells, tissues or biological fluids
- **Consistent** – identical reagent structure and performance among TMTzero, TMTduplex, TMTsixplex and TMT10plex Reagents allow efficient transition from method development to multiplex quantitation
- **Robust** – increased multiplex capability results in fewer missing quantitative values
- **Efficient** – amine-reactive, NHS-ester-activated reagents ensure efficient labeling of all peptides regardless of protein sequence or proteolytic enzyme specificity
- **Compatible** – optimized for use with high-resolution MS/MS platforms, such as Thermo Scientific™ Orbitrap™ Fusion™ Tribrid™, Orbitrap Velos Pro™, Orbitrap Elite and Q Exactive™ Instruments with data analysis fully supported by Thermo Scientific™ Proteome Discoverer™ 1.4 Software



Increased multiplex relative quantitation

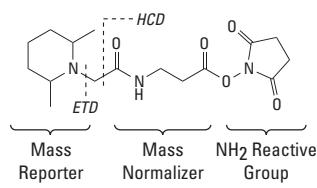
Advantages of the TMT10plex Reagents include increased multiplex relative quantitation, increased sample throughput and fewer missing quantitative values among samples. TMT10plex Reagents are ideal for the analysis of multiple protein samples from inhibitor dose response experiments, time course experiments or biological replicates.

The TMT10plex Reagent Set contains 10 different isobaric compounds with the same mass and chemical structure (i.e., isotopomeric) composed of an amine-reactive NHS-ester group, a spacer arm and a mass reporter. The reagent set enables up to 10 different peptide samples prepared from cells or tissues to be labeled in parallel and then combined for analysis. For each sample, a unique reporter mass (i.e., TMT¹⁰ Reagent that is 126-131Da) in the low-mass region of the high-resolution MS/MS spectrum is used to measure relative protein expression levels during peptide fragmentation and tandem mass spectrometry.

Applications:

- Protein identification and quantitation from multiple samples of cells, tissue or biological fluids
- Protein expression profiling of normal vs. disease states or control vs. treated
- Multiplex up to 10 different samples concurrently in a single experiment
- Quantitative analysis of proteins for which no antibodies are available
- Identification and quantitation of membrane and post-translationally modified proteins
- Identification and quantification of hundreds to thousands of proteins in a single experiment

A. TMT Reagent Generic Chemical Structure



B. TMT10plex Reagents (TMT¹⁰)

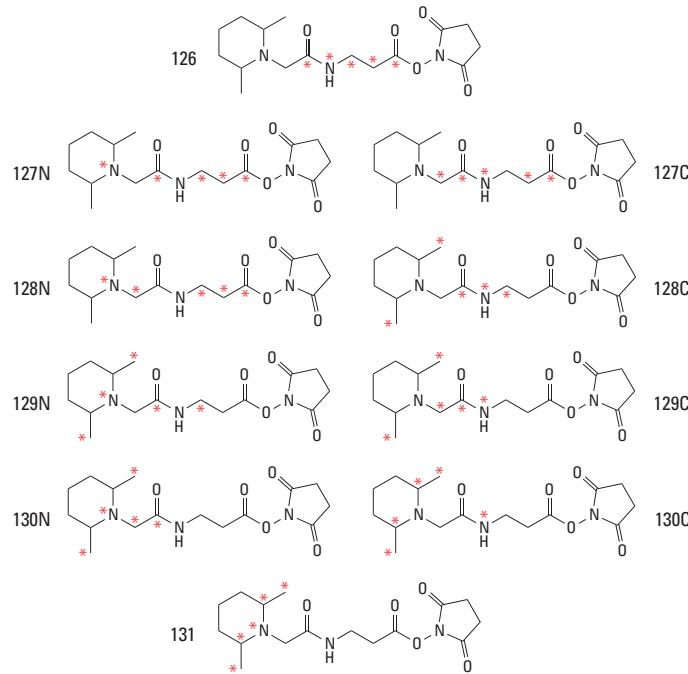


Figure 1. Structural design of the amine-reactive Thermo Scientific TMT10plex Reagents. A. Functional regions of the reagent structure including MS/MS fragmentation sites by higher energy collision dissociation (HCD) and electron transfer dissociation (ETD). B. TMT10plex Reagent structures with ¹³C and ¹⁵N heavy isotope positions (red asterisks).

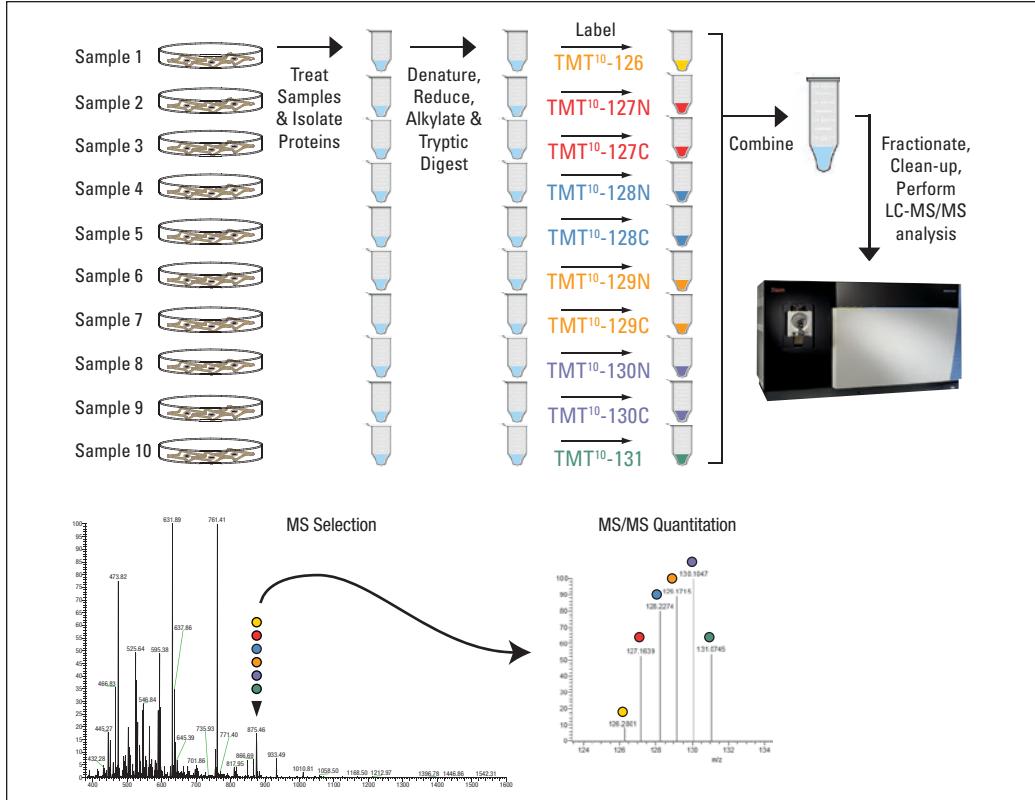


Figure 2. Procedure summary for MS experiments with Thermo Scientific TMT10plex Isobaric Mass Tag Reagents. Protein extracts isolated from cells or tissues are reduced, alkylated and digested overnight. Samples are labeled with the TMT Reagents and then mixed before sample fractionation and clean up. Labeled samples are analyzed by high-resolution Orbitrap LC-MS/MS before data analysis to identify peptides and quantify reporter ion relative abundance.

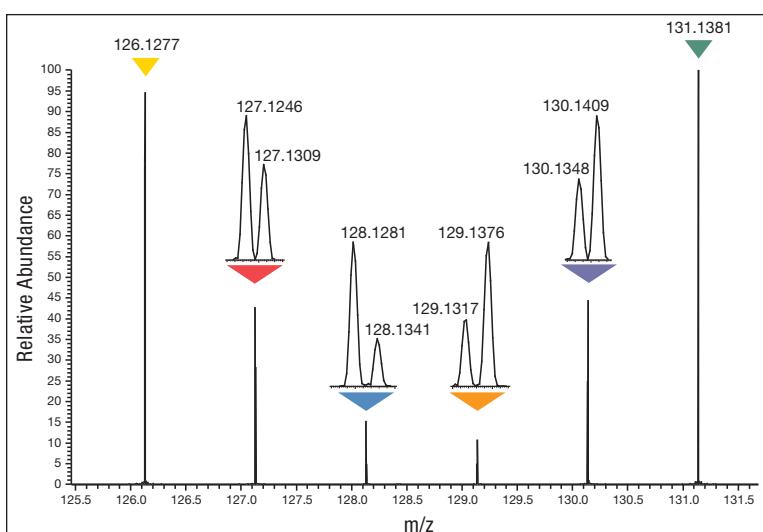


Figure 3. Example of 10-plex relative quantitation using Thermo Scientific TMT10plex Reagents. BSA tryptic digests labeled with TMT10plex Reagents (TMT¹⁰ Reagent that is 126-131Da) were mixed 16:8:4:2:1:2:4:8:16 and analyzed by high-resolution (Orbitrap LC-MS). The relative abundance of the target protein or peptide fragment in 10 different samples is easily measured by comparing the reporter ions generated by MS/MS fragmentation of the different mass tags.

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Ordering Information

Product #	Description	Pkg. Size
PI90110	TMT10plex Labeling Reagents Sufficient reagents for one 10plex experiment	10-rxn set
	TMT ¹⁰ -126™ Label Reagent	0.8mg vial
	TMT ¹⁰ -127N™ Label Reagent	0.8mg vial
	TMT ¹⁰ -127C™ Label Reagent	0.8mg vial
	TMT ¹⁰ -128N™ Label Reagent	0.8mg vial
	TMT ¹⁰ -128C™ Label Reagent	0.8mg vial
	TMT ¹⁰ -129N™ Label Reagent	0.8mg vial
	TMT ¹⁰ -129C™ Label Reagent	0.8mg vial
	TMT ¹⁰ -130N™ Label Reagent	0.8mg vial
	TMT ¹⁰ -130C™ Label Reagent	0.8mg vial
	TMT ¹⁰ -131™ Label Reagent	0.8mg vial
PI90111	TMT10plex Labeling Reagent Sufficient reagents for three 10plex experiments	30-rxn set
	TMT ¹⁰ -126 Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -127N Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -127C Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -128N Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -128C Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -129N Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -129C Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -130N Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -130C Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -131 Label Reagent	3 x 0.8mg vial
PI90113	TMT10plex Isobaric Mass Tag Kit Sufficient reagents for three 10plex experiments	30-rxn kit
	TMT ¹⁰ -126 Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -127N Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -127C Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -128N Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -128C Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -129N Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -129C Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -130N Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -130C Label Reagent	3 x 0.8mg vial
	TMT ¹⁰ -131 Label Reagent	3 x 0.8mg vial
	Dissolution Buffer	5mL
	Denaturing Reagent	1mL
	Reducing Reagent	1mL
	Iodoacetamide	12 vials x 9mg
	Quenching Reagent	1mL
	Pierce™ Trypsin Protease MS-Grade	5 x 20µg
	Albumin, Bovine	2.5mg
	Trypsin Storage Solution	250µL
PI90406	TMT10plex Isobaric Reagent Label Reagent Set Sufficient for 60 samples	Set
	TMT ¹⁰ -126 Label Reagent	5mg vial
	TMT ¹⁰ -127N Label Reagent	5mg vial
	TMT ¹⁰ -127C Label Reagent	5mg vial
	TMT ¹⁰ -128N Label Reagent	5mg vial
	TMT ¹⁰ -128C Label Reagent	5mg vial
	TMT ¹⁰ -129N Label Reagent	5mg vial
	TMT ¹⁰ -129C Label Reagent	5mg vial
	TMT ¹⁰ -130N Label Reagent	5mg vial
	TMT ¹⁰ -130C Label Reagent	5mg vial
	TMT ¹⁰ -131 Label Reagent	5mg vial
PI90114	1M Triethylammonium Bicarbonate (TEAB)	50mL
PI90115	50% Hydroxylamine	5mL

Related Products

Product #	Description	Pkg. Size
PI90064	TMTsixplex Isobaric Mass Tagging Kit Formulation: Multi-component kit with TMT ⁶ -126, TMT ⁶ -127, TMT ⁶ -128, TMT ⁶ -129, TMT ⁶ -130, TMT ⁶ -131 label reagents Sufficient for 5 complete sixplex (5 x 6-way) experiments Kit Contents: TMT ⁶ Label Reagent TMT ⁶ -126 Label Reagent TMT ⁶ -127 Label Reagent TMT ⁶ -128 Label Reagent TMT ⁶ -129 Label Reagent TMT ⁶ -130 Label Reagent TMT ⁶ -131 Label Reagent Dissolution Buffer (1M triethyl ammonium bicarbonate) Denaturing Reagent (10% SDS) Reducing Reagent (0.5 M TCEP) Iodoacetamide Quenching Reagent (50% hydroxylamine) Trypsin Trypsin Storage Solution Albumin, Bovine	35-rxn set
PI90064B	TMTsixplex Isobaric Mass Tagging Kit Same formulation and kit contents as Product # 90064. Available in custom sizes.	Custom
PI90066	TMTsixplex Label Reagent Set, 5 x 0.8mg Formulation: Set of TMT ⁶ -126, TMT ⁶ -126, TMT ⁶ -127, TMT ⁶ -128, TMT ⁶ -129, TMT ⁶ -130, TMT ⁶ -131 label reagents Sufficient for 5 sixplex (5 x 6-way) experiments Kit Contents: TMT ⁶ -126 Label Reagent TMT ⁶ -127 Label Reagent TMT ⁶ -128 Label Reagent TMT ⁶ -129 Label Reagent TMT ⁶ -130 Label Reagent TMT ⁶ -131 Label Reagent	30-rxn set
PI90068	TMTsixplex Label Reagent Set, 2 x 5mg Formulation: Set of TMT ⁶ -126, TMT ⁶ -126, TMT ⁶ -127, TMT ⁶ -128, TMT ⁶ -129, TMT ⁶ -130, TMT ⁶ -131 label reagents Sufficient for 12 sixplex (12 x 6-way) experiments Kit Contents: TMT ⁶ -126 Label Reagent TMT ⁶ -127 Label Reagent TMT ⁶ -128 Label Reagent TMT ⁶ -129 Label Reagent TMT ⁶ -130 Label Reagent TMT ⁶ -131 Label Reagent	72-rxn set
PI90061	TMTsixplex Label Reagent Set, 1 x 0.8mg Formulation: Set of TMT ⁶ -126, TMT ⁶ -126, TMT ⁶ -127, TMT ⁶ -128, TMT ⁶ -129, TMT ⁶ -130, TMT ⁶ -131 label reagents Sufficient for 1 sixplex (1 x 6-way) experiments Kit Contents: TMT ⁶ -126 Label Reagent TMT ⁶ -127 Label Reagent TMT ⁶ -128 Label Reagent TMT ⁶ -129 Label Reagent TMT ⁶ -130 Label Reagent TMT ⁶ -131 Label Reagent	6-rxn set
PI90062	TMTsixplex Label Reagent Set, 2 x 0.8mg Formulation: Set of TMT ⁶ -126, TMT ⁶ -126, TMT ⁶ -127, TMT ⁶ -128, TMT ⁶ -129, TMT ⁶ -130, TMT ⁶ -131 label reagents Sufficient for 2 sixplex (2 x 6-way) experiments Kit Contents: TMT ⁶ -126 Label Reagent TMT ⁶ -127 Label Reagent TMT ⁶ -128 Label Reagent TMT ⁶ -129 Label Reagent TMT ⁶ -130 Label Reagent TMT ⁶ -131 Label Reagent	12-rxn set

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