Glowing products for science

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GloMelt™ 2.0 Thermal Shift Protein Stability Kit



A high-throughput fluorescence-based assay for protein stability screening with higher tolerance for detergents and other protein additives compared to commonly used Thermal Shift dyes.

Product attributes

Excitation/Emission	468/507 nm

Product Description

The GloMelt™ 2.0 Thermal Shift Protein Stability Kit is a high-throughput and cost efficient method for screening ligand binding of molecules or identifying stability changes from protein modifications. The assay measures protein thermal stability, also known as a thermal shift assay, Protein Thermal Shift™, differential scanning fluorimetry, or Thermofluor assay.

The GloMelt™ 2.0 Thermal Shift Protein Stability Kit features Recombinant Monoclonal Mouse IgG1 for performing control reactions. Compared to the polyclonal goat IgG control provided in our original GloMelt™ kit, this recombinant mouse antibody is more relevant for therapeutic antibody research and generates higher signal and a sharper melt peak between for robust assay validation.

A Simple and Rapid Method for Sample Screening

GloMelt™ dye undergoes fluorescence enhancement upon binding to hydrophobic regions of denatured proteins, and therefore can be used to detect protein unfolding or measure thermal stability by performing a thermal shift assay, also called Protein Thermal Shift™, differential scanning fluorimetry, or Thermofluor assay.

The thermal shift assay is a rapid and inexpensive technique that quantifies change in protein denaturation temperature, and thus can be used to screen conditions that affect protein thermal stability, such as protein mutations, ligand binding, and buffer formulations (like pH, salts, detergents, and other additives). These assays are rapid (typically about 30 minutes) and are performed on a quantitative PCR system. The thermal shift method is compatible with high-throughput screening and requires much less protein than methods such as circular dichroism and differential scanning calorimetry.

GloMelt™ Dye vs. Competitors

GloMelt™ Dye has significant advantages over other environmentally sensitive dyes, such as SYPRO® Orange and PROTEOSTAT® TS dye. GloMelt™ Dye generates a strong signal because it is optimized for detection in the SYBR® Green channel of qPCR instruments, and therefore low reaction volumes and low protein concentrations can be used. GloMelt™ Dye is compatible with high concentrations of protein stabilizers (such as glycerol and sorbitol), and also protein destabilizers (such as DTT and imidazole). GloMelt™ Dye performs very well in high detergent concentrations, unlike SYPRO® Orange. Another advantage is that ROX dye can be included with GloMelt™ Dye during thermal shift assays, which improves results by increasing replicate consistency in PCR instruments that require ROX passive reference dye.

Higher Tolerance for Detergents

Higher Tolerance for Reducing Agents

To learn more about GloMelt™ and see how it compares to competitor products, visit our GloMelt™ Technology Page.

SYBR is a registered trademark of Thermo Fisher Scientific. Proteostat is a registered trademark of Enzo Life Sciences.

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