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Product Information

Universal Detection Reagent

Catalog Numbers
APPA002 – Green Universal Detection Reagent
APPA012 – Cyan Universal Detection Reagent
APPA013 – Yellow Universal Detection Reagent
Storage Temperature –20 °C

Product Description

The split fluorescent protein (FP) system is a simple tagging and detection technique, which may be used to determine the solubility of a protein, its domain, or protein aggregation. Three different FP systems, Green Fluorescent Protein (GFP), Cyan Fluorescent Protein (CFP), or Yellow Fluorescent Protein (YFP), may be used to quantify the expression level of a tagged protein of interest (POI).

The POI is terminally tagged with the non-fluorescent Stand 11 (FP-S11) peptide of the fluorescent protein. The appropriate S1-10 Universal Detection Reagent complements the FP-S11 tag and forms the fluorescent protein, providing a time-dependent increase in fluorescence. The fluorescence is readily detectable by fluorescence microscopy within 15 minutes after introduction of the appropriate S1-10 Universal Detection Reagent.

Since the POI is expressed with only the short FP-S11 tag, there is minimal folding perturbation compared to expressing the POI as a direct full-length FP fusion. This allows for the determination of the amount of the protein of interest that is properly folded in a given sample as the folding reporter gives a signal directly proportional to the amount of correctly folded protein.

Components

The S1-10 Universal Detection Reagent is provided as a ready-to-use solution for use with the following *In Vitro* "Fold 'n' Glow"™ Solubility Assay Kits:

	GFP	CFP	YFP
Mammalian kits	APPA005	APPA010	APPA011
Bacterial kits	APPA001	APPA008	APPA009

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

It is recommended to store the product at –20 °C or to re-aliquot the reagent to smaller working volumes to avoid repeated freeze-thawing and store at –70 °C.

References

1. Waldo, G.S. et al., Rapid protein-folding assay using green fluorescent protein. Nature Biotechnology, **17**, 691-695 (1999).
2. Cabantous, S. et al., Protein tagging and detection with engineered self-assembling fragments of green fluorescent protein. Nature Biotechnology, **23**, 102-107 (2004).

"Fold 'n' Glow" is a trademark of Sandia Biotech.

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