

# EnzChek™ Protease Assay Kits

*One-step fluorescence-based protease assays*



## **Easy**

Simply incubate your sample with the provided substrate and then measure fluorescence.

## **Fast**

Get results in about an hour.

## **Reliable**

No separation steps means more accurate results.

## **Versatile**

Fluorescence is pH insensitive. Use to assay a wide variety of proteases.

## **Convenient**

Use a fluorescence microplate reader or fluorometer.

The EnzChek™ Protease Assay Kits provide fast, simple and direct fluorescence-based assays for detecting a wide variety of metallo-, serine, acid and thiol proteases.<sup>1</sup> In the assay, simply incubate your protease — in the presence of inhibitor, if desired — with the provided substrate and then measure fluorescence. Because the assay is continuous, you can easily obtain kinetic information by measuring the fluorescence increase over time.

The kits contain a casein substrate that is heavily labeled with green fluorescent BODIPY® FL or red fluorescent BODIPY TR-X dye, resulting in almost total quenching of the conjugate's fluorescence. Protease-catalyzed hydrolysis relieves this quenching, yielding bright green or red fluorescent peptides, respectively (Figure 1). The increase in fluorescence, which can be measured with a fluorescence microplate reader or fluorometer, is proportional to protease activity (Figure 2).

BODIPY FL and BODIPY TR-X casein can be used interchangeably, depending on whether green or red fluorescence is desired. The green fluorescent peptide hydrolysis products of BODIPY FL casein (approximate excitation/emission 505/515 nm) can be detected using filters or settings designed for use with fluorescein. The red fluorescent peptide hydrolysis products of BODIPY TR-X casein (approximate excitation/emission 590/620 nm) can be detected using filters or settings designed for use with Texas Red® dye. The red fluorescence protease assay kit should be useful for measurements in the presence of green autofluorescence.

## References

1. Jones, L.J. et al., (1997) Anal Biochem, in press.

## Kit Contents

Each EnzChek Protease Assay Kit includes sufficient reagents for 100 assays using 2 mL assay volumes and standard fluorescence cuvettes or 1000 assays using 200 µL assay volumes and 96-well microplates. Each kit contains:

- BODIPY FL casein (green) or BODIPY TR-X casein (red)
- 20X Digestion buffer
- Detailed protocol

## Ordering Information

**E-6638** EnzChek™ Protease Assay Kit \*green fluorescence\* \*100–1000 assays\*

**E-6639** EnzChek™ Protease Assay Kit \*red fluorescence\* \*100–1000 assays\*

For information about any of Molecular Probes' products, please contact our Technical Assistance Department.

Molecular Probes can custom label alternative protease substrates to meet individual needs. For more information about this service, please contact our Custom and Bulk Sales Department at (541) 465-8390.

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