BIO Scientific pty. ltd.

Newsletter SEPTEMBER 2016

BioScientific aims to keep our researchers and customers updated with news from our various suppliers with our Newsletter – We are constantly sourcing top quality products for your research.

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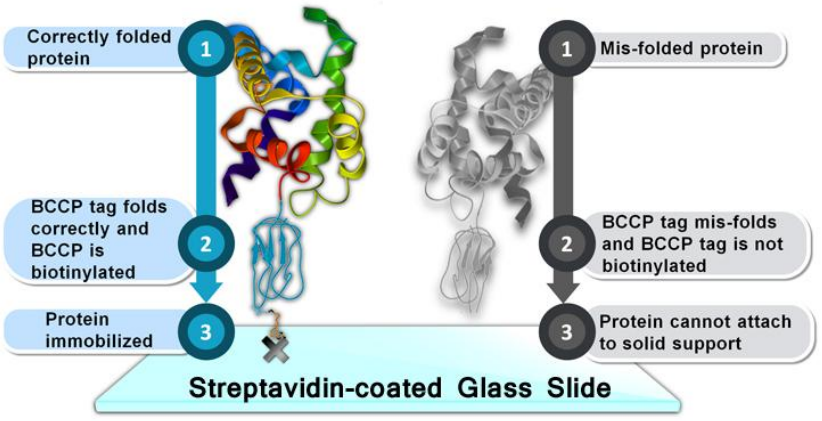

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BACHEM

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FRET

In fluorescence (or Förster) energy transfer (FRET), the fluorescence of an excited fluorophore (donor) is absorbed by a second dye label (acceptor). Donor and acceptor are also often referred to as "FRET-pair". In contrast to collisional or dynamic quenching, a direct contact between fluorophore and quencher is not required. Since FRET typically takes place in a distal range between 1-10 nm, it can be employed to measure processes on a molecular scale. The acceptor can either act as a secondary fluorophore (radiometric FRET), or, can abolish (quench) the donor fluorescence, the latter used for example in protease assays (Figure 1). In order to obtain an efficient FRET, the emission spectrum of the donor and the absorption spectrum of the acceptor label should overlap as complete as possible.

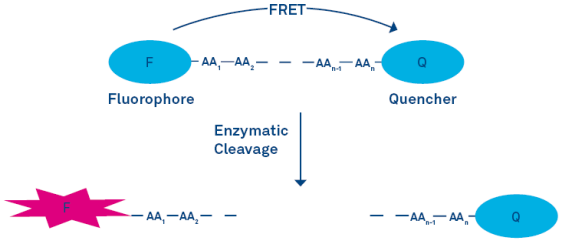

Figure 1: ***Typical protease activity assay using a FRET substrate. Substrate cleavage separates fluorophore (F) and quencher (Q), thus recovering the donor fluorescence.***

Imaging of cellular structures and the understanding of molecule-molecule interactions have utmost impact on the advances in modern medicine. Thereby, fluorescently labeled peptides are indispensable tools for a number of methods in cutting-edge research.

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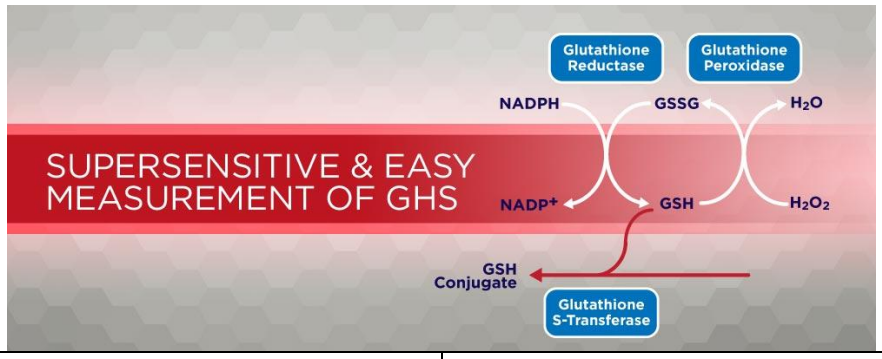

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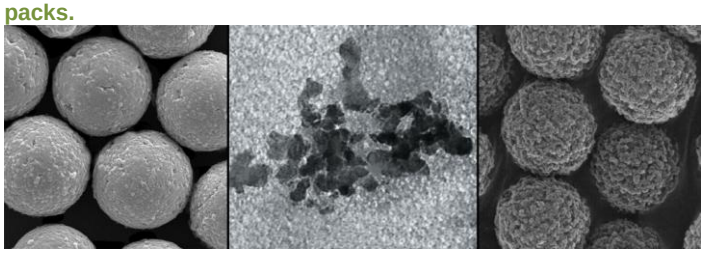

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