



THE TECHNOLOGY

Ubiquitination has been shown to be a critical step in various cellular processes, including cell division, signal transduction, neurotransmission, and development. The alteration of ubiquitination pathways induces many neurodegenerative diseases and cancers. It is critical to identify the ubiquitinated proteins and ubiquitination sites as well. Unfortunately, elucidation of the proteins targeted by ubiquitination has been difficult because of the technical challenge in recovering modified proteins. An antibody against the remnant of the trypsinized ubiquitinated proteins has been developed. It specifically recognizes the diglycine modified lysines on their epsilon amines derived from ubiquitinated proteins. This invention enables enrichment of peptides derived from ubiquitinated proteins, and therefore, significantly increases the efficiency of high-throughput identification of ubiquitination sites.

THE PRODUCT

Digycyl-Lysine Antibody, clone GX41

This is a monoclonal antibody which recognizes a diglycine modified lysine, the trypsinized remnant of ubiquitination. The recognition does not depend on neighboring backbone amino acid sequences. It has been shown to specifically detect peptides derived from the ubiquitinated portion of proteins.

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