Di-Ubiquitin K63 (IQF, Position-4)

IQF DiUb Technology

LifeSensors' diubiquitin substrates represent a new class of substrates for the continuous fluorescent measurement of true isopeptidase activity. The C-terminus of wild type ubiquitin is conjugated via an isopeptide bond to lysine 48 (K48) of a second ubiquitin molecule with the resultant diubiquitin forming an internally quenched fluorescent FRET pair (IQF). Each ubiquitin is labeled with a single molecule of either a fluorescent reporter (i.e. TAMRA) or a highly efficient quenching dye. Cleavage of the IQF DiUb by deubiquitylases leads to separation of the fluorophore from quencher and subsequent increase in observed fluorescence.

IQF DiUb Variants

There is a remarkable difference between K48- and K63-linked ubiquitin molecules in their three-dimensional structure, which accounts for their individual functions. Beyond differential linkages (e.g. K48, K63, K11), LifeSensors has created subpanels of IQF diubiquitin substrates within each linkage. Because each DUB is likely to recognize and cleave substrates with unique steric considerations, these subpanels vary in location of reporter fluorophore and quencher. We recommend that each DUB be empirically evaluated against a panel of IQF DiUb substrates to select the the optimal fluorophore/quencher pairing.

IQF DiUb substrate panels

In order to efficiently determine the optimal substrate for any DUB, or rapidly assess a panel of various DUBs, LifeSensors offers comprehensive panels for either K48 (**DiUb48 panel cat no. DU0101**) or K63 linked diubiquitins (**DiUb63 Panel DU0102**). Each panel contain all six variants of the respective linkage along with a control enzyme (USP2core). In addition there is also a full (K48/K63) panel (**DU0201**) that contains all 12 variants.

Ordering Information

Order Online »

LSI-DU-6304-0050	50µg

Manuals, SDS & CofA

View Online »

Handling & Storage

Shipping Blue Ice

Regulatory Status RUO - Research Use Only

Product Details

Source Human

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