Ubiquitin (bovine), (native) (methylated)

Octa-dimethyl-ubiquitin: $(CH_3)_2$ -MQIFVK*TLTGK*TITLEVEPSDTIENV K*AK*IQDK*EGIPPDQQRLIFAGK*QLEDGR TLSDYNIQK*ESTLHLVLRLRGG-OH where K* = $(\epsilon$ -dimethyl)lysyl.

Reductive methylation of the seven internal lysine ϵ -amino groups as well as the α -amino group to give, in this case, the octa-dimethyl derivative renders ubiquitin unable to form multi-ubiquitin chains via lysine linkages. However, the ability of this methylated ubiquitin to form an active C-terminal thioester is preserved and it may be transferred by ubiquitinactivating and conjugating enzymes (E1 and E2s) to lysine residues within substrate proteins to yield monoubiquitinylated products.

Citations: 1

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Ordering Information

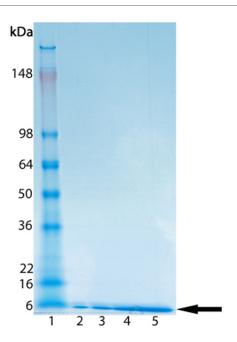
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BML-UW8555-0001

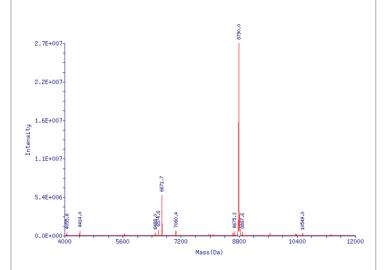
1mg

Manuals, SDS & CofA

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SDS-PAGE Analysis: Lane 1: MW Marker, Lane 2: 0.5 μ g, Lane 3: 1.0 μ g, Lane 4: 2.0 μ g, Lane 5: 5.0 μ g of Purified Ubiquitin (methylated) (bovine), (native) (Prod. No. BML-UW8555).



Mass spectrum analysis by electrospray ionization mass spectrometry, (see image) indicates the octadimethylated ubiquitin molecular weight at 8790 Da (± 1.6 Da), doubly charged species present at 6671.7 Da. This is fully consistent with the anticipated molecular weight, given that for parent ubiquitin a molecular weight of 8565.4 Da (± 1.6 Da) is observed under identical conditions. There is no un-derivatized ubiquitin present. The signal observed at 8675.3 Da is attributable to a minor contaminant in the starting ubiquitin and is not due to the presence of octa-monomethylated ubiquitin. All other minor signals observed are at background level and are not indicative of protein artifacts.

Handling & Storage

Use/Stability As indicated on product label or CoA when stored as recommended. Store solid cold

and dry at -20C; stable for at least one year. Store solutions at -20C for up to three

months. The protein is stable to multiple freeze-thaw cycles.

Long Term Storage -20°C

Shipping Blue Ice

Regulatory Status RUO - Research Use Only

Product Details

Appearance White solid.

Application Notes Simplifies kinetics for E1-catalyzed active thioester

formation.

Typical concentrations for non-rate limiting support of *in vitro* conjugation reactions lie in the range 200µM to 1mM

depending upon individual conditions.

Formulation Lyophilized in HPLC-grade water.

MW ~8.7kDa

Purity ≥95% (SDS-PAGE)

Solubility Soluble and stable in DMSO and aqueous buffers up to

100 mg/mL. The solid will dissolve with gentle vortexing at

the desired concentration.

Source Native bovine.

UniProt ID P0CG53

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