Hdm2 (catalytic RING domain) (human), (recombinant) (GST-tag)

p53 is a much studied and complex multifunctional protein, which plays a major role in the cellular response to DNA damage and other genomic aberrations. The activation of p53 can lead to either cell cycle arrest and DNA repair, or apoptosis, through its involvement in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for these processes. Activation and regulation of the p53 transcription pathway is controlled by a range of post-translational modifications including acetylation, phosphorylation and ubiquitinylation. In normal cells, p53 is maintained at a low level mainly through Hdm2-mediated ubiquitinylation and subsequent degradation by the proteasome. Hdm2 is a RING domain dependent ubiquitin E3 ligase that utilizes its C-terminal RING domain to promote not only p53 ubiquitinylation, predominantly at the C-terminus of p53, but also to target Hdm2 itself for auto-ubiquitinylation and subsequent degradation. The isolated Hdm2 C-terminal RING domain (residues 418-491) has been shown to be sufficient for both p53 and self-ubiquitinylation activity.

Citations: 2 View Online »

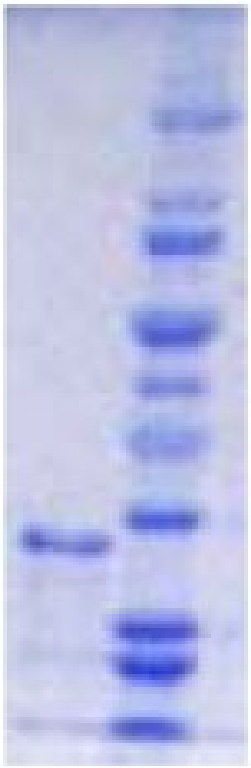
Ordering Information

Order Online »

BML-UW0200-0025	25µg

Manuals, SDS & CofA

View Online »



SDS-PAGE analysis: Lane 1: 2µg GST-Hdm2 catalytic RING domain (Prod. No. BML-UW0200). Lane 2: MW markers (top to bottom) 116, 97, 84, 66, 55, 45, 36, 29, 24, 20.



Activity analysis: Hdm2 catalytic RING domain ubiquitinylation of p53 (Prod. No. BML-FW8820) +/- Hdm2 RING domain. p53 species detected by western blotting using p53 monoclonal antibody (Prod. No. BML-PW1085).

Handling & Storage

Long Term Storage -80°C

Shipping Dry Ice

Regulatory Status RUO - Research Use Only

Product Details

Activity

Modifies p53 (Prod. No. BML-FW8820) in ubiquitinylation reactions containing Ube1 (Prod. No. BML-UW9410), UbcH5b (Prod. No. BML-UW9060) and energy regeneration solution.

Alternative Name

Human double minute 2 protein

Application Notes

Uses:
1.*in vitro* generation of ubiquitinylated p53 for use in Ub-p53 related studies.
2.Investigation of the p53 ubiquitin modification process itself.
3.Ubiquitin modification of other known Hdm2 substrate proteins.
4.NEDD8 modification of p53.

Formulation

Liquid. In TBS, pH 7.5, containing 150mM sodium chloride and 1mM DTT.

MW

~35kDa

Purity

≥95% (SDS-PAGE)

Purity Detail

Purified by glutathione affinity chromatography.

Source

Produced in *E. coli* BL21 (λDE3).

UniProt ID

Q00987

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