

DESCRIPTION

Source *E. coli*-derived human MDM2/HDM2 protein
Met1 - Pro491 with a N-terminal GST (glutathione S-transferase) tag
Accession # Q00987.1

Predicted Molecular Mass 82 kDa

SPECIFICATIONS

Activity Recombinant Human GST-Mdm2 is a Ubiquitin ligase (E3) that functions downstream of a Ubiquitin-activating (E1) enzyme and a Ubiquitin-conjugating (E2) enzyme to conjugate Ubiquitin to substrate proteins. Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human GST-Mdm2 concentration of 0.5-4 μM.

Purity >85%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Formulation Supplied as a solution in HEPES, NaCl, TCEP and Glycerol. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Shipping The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 6 months from date of receipt, -70 °C as supplied.
- 3 months, -70 °C under sterile conditions after opening.

BACKGROUND

Double minute 2 protein (Mdm2, also known as Hdm2) is a RING-finger Ubiquitin E3 ligase that acts as a major regulator of the tumor suppressor p53. Mdm2 inhibits p53-mediated cell cycle arrest and apoptosis by binding its transcriptional activation domain. The E3 ligase activity is confined to the C-terminal domain of Mdm2 and is responsible for the ubiquitination and subsequent proteasomal degradation of p53. Although the isolated RING domain is capable of p53 ubiquitination, other regions of the protein including a central acidic domain are also crucial for full E3 ligase activity. Mdm2 also regulates its own intracellular levels by auto-ubiquitination, and can be SUMOylated which decreases autoubiquitination activity but increases activity toward p53. Mdm2 also affects the cell cycle and apoptosis through interactions with other proteins such as retinoblastoma1 (pRB) and ribosomal protein L5.

References:

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