

DESCRIPTION

Source *Spodoptera frugiperda*, Sf 21 (baculovirus)-derived human USP7 protein
Met1 - Asn1102 with a N-terminal 8-His tag
Accession # Q93009.2

Predicted Molecular Mass 130 kDa

SPECIFICATIONS

Activity Recombinant Human His8-USP7 is a Ubiquitin-specific deconjugating enzyme. Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human His8-USP7 concentration of 1-5 nM.

Purity >95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Formulation Supplied as a 0.2 µm filtered solution in HEPES, NaCl, EDTA, DTT, 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

Ubiquitin Specific Peptidase 7 (USP7), also known as Herpes Virus-associated Ubiquitin Specific Protease (HAUSP), is a widely expressed deubiquitinating enzyme belonging to the peptidase C19 family (1). It has a predicted molecular weight of 130 kDa (2). Human USP7 is 1102 amino acids (aa) in length and shares 99% aa sequence identity with the mouse and rat orthologs (2,3). USP7 consists of a cysteine peptidase core (aa 208-560) that is flanked by an N-terminal TRAF-like domain (aa 50-205) and two C-terminal protease-resistant domains (aa 622-801 and 885-1061) (2,3). USP7 can be phosphorylated at Ser18 and Ser963 and ubiquitinated at Lys869 (2,4). USP7 was initially identified as a p53-interacting protein that deubiquitinates p53, thereby stabilizing the protein and inducing p53-dependent cell growth arrest and apoptosis (5). USP7 also targets the p53 regulatory proteins MDM2, MDMX, and Daxx, the epigenetic regulator Histone 2B, and the transcription factor FoxO4 (4,6-10). Additionally, USP7 interacts with the HSV-1 immediate early protein ICP0, contributing to the stabilization and transactivation capability of ICP0 during HSV-1 infection (1,11,12).

References:

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