

Human USP7 / HAUSP Protein (His & GST Tag)

Catalog Number: 11681-H20BL



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

HAUSP; TEF1; 2210010O09Rik; AA409944; AA617399; AU019296; AW548146; C80752; Hausp

Protein Construction:

A DNA sequence encoding full length of human USP7 (NP_003461.2) (Met 1-Asn 1102) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA . Immobilized human P53 at 2 µg/ml (100 µl/well) can bind human USP7 with a linear ranger of 6.4-160 ng/ml .

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human USP7/GST chimera consists of 1339 amino acids and has a calculated molecular mass of 156 kDa. It migrates as an approximately 140 band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris 100mM NaCl, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

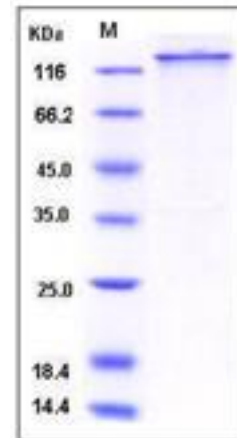
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Ubiquitin carboxyl-terminal hydrolase 7, also known as Ubiquitin thioesterase 7, Herpesvirus-associated ubiquitin-specific protease, Ubiquitin-specific-processing protease 7, USP7 and HAUSP, is a widely expressed protein which belongs to the peptidase C19 family. USP7 is a member of the family of deubiquitinating enzymes. It is involved in the regulation of stress response pathways, epigenetic silencing and the progress of infections by DNA viruses. USP7 is a protein with a cysteine peptidase core, N- and C-terminal domains required for protein-protein interactions. USP7 contributes to epigenetic silencing of homeotic genes by Polycomb (Pc). USP7 cleaves ubiquitin fusion protein substrates. It deubiquitinates TP53/p53 and MDM2 and strongly stabilizes TP53 even in the presence of excess MDM2. USP7 also induces TP53-dependent cell growth repression and apoptosis. USP7 has key roles in the p53 pathway whereby it stabilizes both p53 and MDM2. Herpes simplex virus type 1 (HSV-1) regulatory protein ICP0 stimulates lytic infection and the reactivation of quiescent viral genomes. ICP0 interacts very strongly with USP7. USP7-mediated stabilization of ICP0 is dominant over ICP0-induced degradation of USP7 during productive HSV-1 infection. The biological significance of the ICP0-USP7 interaction may be most pronounced in natural infection situations, in which limited amounts of ICP0 are expressed.

References

- 1.Zakut-Houri R., *et al.*,(1985), Human p53 cellular tumor antigen: cDNA sequence and expression in COS cells. EMBO J. 4:1251-1255.
- 2.Lamb P., *et al.*, (1986), Characterization of the human p53 gene.Mol. Cell. Biol. 6:1379-1385.
- 3.Harlow E., *et al.*,(1985), Molecular cloning and in vitro expression of a cDNA clone for human cellular tumor antigen p53.Mol. Cell. Biol. 5:1601-1610.

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