

Human OTUB1 / OTB1 Protein (His Tag)

Catalog Number: 12927-H07E



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

HSPC263; OTB1; OTU1

Protein Construction:

A DNA sequence encoding the human OTUB1 (Q96FW1-1) (Met 1-Lys 271) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

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 OTUB1 consisting of 282 amino acids and has a calculated molecular mass of 32.8 kDa. The apparent molecular mass of the protein is approximately 37 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, 20% glycerol, pH 7.4

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:

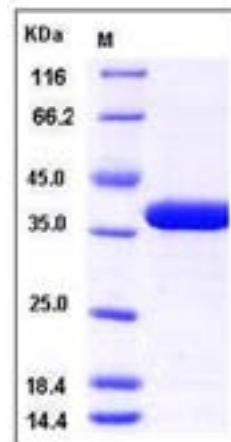
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Ubiquitin thioesterase OTUB1, also known as Deubiquitinating enzyme OTUB1, OTU domain-containing ubiquitin aldehyde-binding protein 1, Otubain-1, Ubiquitin-specific-processing protease OTUB1, OTUB1 and OTB1, is a cytoplasm protein which belongs to the peptidase C65 family. OTUB1 is a hydrolase that can remove conjugated ubiquitin from proteins and plays an important regulatory role at the level of protein turnover by preventing degradation. OTUB1 is a regulator of T-cell anergy, a phenomenon that occurs when T-cells are rendered unresponsive to antigen rechallenge and no longer respond to their cognate antigen. OTUB1 acts via its interaction with RNF128 / GRAIL, a crucial inducer of CD4 T-cell anergy. Isoform1 of OTUB1 destabilizes RNF128, leading to prevent anergy. In contrast, isoform2 of OTUB1 stabilizes RNF128 and promotes anergy. OTUB1 regulates RNF128-mediated ubiquitination, but does not deubiquitinate polyubiquitinated RNF128. Deubiquitinates estrogen receptor alpha (ESR1). OTUB1 mediates deubiquitination of 'Lys-48'-linked polyubiquitin chains, but not 'Lys-63'-linked polyubiquitin chains. OTUB1 is also capable of removing NEDD8 from NEDD8 conjugates, but with a much lower preference compared to 'Lys-48'-linked ubiquitin.

References

1. Balakirev M.Y., et al., 2003, EMBO Rep. 4:517-522. 2. Soares L., et al., 2004, Nat. Immunol. 5:45-54. 3. Stanicic V., et al., 2009, J. Biol. Chem. 284:16135-16145.

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