

Human / Mouse USP46 Protein (SUMO Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 12976-H21B

General Information

Gene Name Synonym:

USP46

Protein Construction:

A DNA sequence encoding the human USP46 [(Identical to the mouse USP46 (NP_808229.1)) (Met1-Glu366)] was expressed and purified.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

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 secreted recombinant human USP46 consists of 477 amino acids and predicts a molecular mass of 55.2 KDa. The apparent molecular mass of the protein is approximately 64 Kda in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% gly

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:

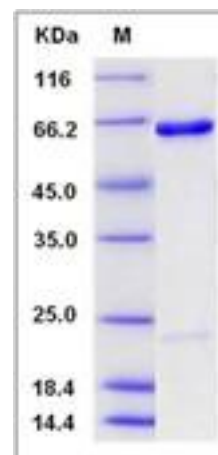
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

USP46 belongs to the peptidase C19 family, USP12/USP46 subfamily. Deubiquitinating enzymes (DUBs) are a large group of proteases which are also commonly referred to as deubiquitinating peptidases, deubiquitinating isopeptidases, deubiquitinases, ubiquitin proteases, ubiquitin hydrolyases, ubiquitin isopeptidases, or Dubs. They regulate ubiquitin-dependent metabolic pathways by cleaving ubiquitin-protein bonds. They also may act as negative and positive regulators of the ubiquitin system. Besides ubiquitin recycling, they are also involved in processing of ubiquitin precursors, in proofreading of protein ubiquitination and in disassembly of inhibitory ubiquitin chains. USP46 is a deubiquitinating enzyme that plays a role in behavior, possibly by regulating GABA action. It may act by mediating the deubiquitination of GAD1/GAD67. USP46 has almost no deubiquitinating activity by itself and requires the interaction with WDR48 to have a high activity and it is not involved in deubiquitination of monoubiquitinated FANCD2.

References

- 1.Joo HY, *et al.* (2011) Regulation of histone H2A and H2B deubiquitination and Xenopus development by USP12 and USP46. *J Biol Chem.* 286(9):7190-201.
- 2.Kushima I, *et al.* (2010) Association study of ubiquitin-specific peptidase 46 (USP46) with bipolar disorder and schizophrenia in a Japanese population. *J Hum Genet.* 55(3):133-6.
- 3.Cohn MA, *et al.* (2009) UAF1 is a subunit of multiple deubiquitinating enzyme complexes. *J Biol Chem.* 284(8):5343-51.

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