

Recombinant Human USP2 Protein

Introduction

The ubiquitin-specific proteases (USPs) are the largest subgroup of the deubiquitylating enzyme (DUBs) family. Members of this family inhibit the degradation of target proteins in the ubiquitin-proteasome pathway or affect the endocytosis, transport and activity of target proteins by catalyzing the removal of their ubiquitin modifications. They are important potential targets for tumour interference therapy by catalyzing the removal of ubiquitin modifications from target proteins, thereby inhibiting the degradation of the ubiquitin-proteasome pathway or affecting the endocytosis, transport and activity of the target protein.

Deubiquitinating proteases (USP2), also known as UBP41 and USP9, are cytoplasmic proteins belonging to the C19 family of deubiquitinating enzyme peptidases. USP2 is widely expressed and acts on deubiquitinating selected target substrates involved in tumour, biological clock, metabolism, inflammation and other processes. To date, at least three USP2 isoforms are known, namely USP2a (also known as USP2-69), USP-41 and USP2-45. All of them contain the same catalytic core but exhibit variations within their N-terminal and C-terminal structural domains.

USP2a is a canonical isoform of 605 amino acids in length with a predicted molecular weight of 68 kDa. Human USP2a shares 90% amino acid sequence identity with its direct mouse and rat homologs. usp-41 and usp-45 are 362 and 396 amino acids in length, respectively, with predicted molecular weights of 41 and 45 kDa. usp-41 and usp2a have been shown to be key regulators of apoptosis and cell proliferation. They deubiquitinate polyubiquitinated target proteins (e.g. FAS, MDM2 and cyclin D1) to promote or block apoptosis, depending on the context. expression of USP-45 appears to be regulated by circadian rhythms and trophic cues and is thought to regulate hepatic gluconeogenesis and glucose metabolism. The amino acid sequence of recombinant human deubiquitinating protease 2 is the catalytic structural domain at positions 259 to 605.

Components and Storage

Components	PH1011-10 µg	PH1011-50 µg	PH1011-100 µg	PH1011-1 mg
Recombinant Human USP2 Protein (1 mg/mL)	0.01 mL	0.05 mL	0.1 mL	1 mL
Store the components at -80 °C.				

Product description

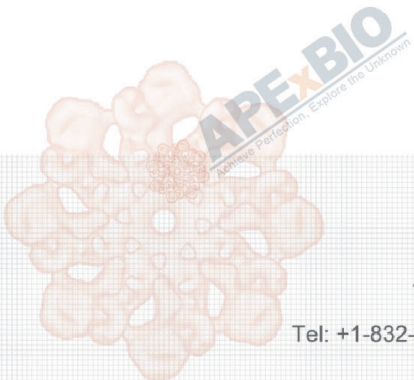
Name	Recombinant Human USP2 Protein
Species	Human
Source	<i>E. coli</i> -derived human USP2 protein
Storage Buffer:	50 mM HEPES pH 7.5, 100 mM NaCl, and 1 mM DTT
Purity	>95% SDS-PAGE
Amino acids	259 to 605
MW	~41 kDa
Day	His tag C-Terminus
Biological Activity	Recombinant Human USP2 Catalytic Domain is a Ubiquitin-specific deconjugating enzyme. Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human USP2 Catalytic Domain concentration of 1-5 nM.
Amino Acid Sequence	MNSKSAQGLAGLRNLGNTCFMNSILQCLSNTRDLRDYCLQRLYMRDLH HGSNAHTALVEEFAKLIQTIWTSSPNDVVSPEFKTQIQRYAPRFVGYNQQ DAQEFLRFLLDGLHNEVNRVTLRPKSNPENLDHLPDDEKGRQMWRKYL EREDSRIGDLFVGQLKSSLTCTDCGYCSTVFDPFWDLSLPIAKRGYPEVTL MDCMRLFTKEDVLDGDEKPTCCRCRGRKRCIKKFSIQRFPKILVLHLKRF SESRI RTSKLTTFVNFLRDLDLREFASENTNHAVYNLYAVSNHSGTTMGG HYTAYCRSPGTGEWHTFNDSSVTPMSSSQVRTSDAYLLFYELASPPSRMH HHHHH

Experimental operations

1. Before use, centrifuge 8,000-12,000 g for 10-30 sec so that proteins attached to the cap or wall of the tube gather at the bottom of the tube.
2. Configure working fluid: select a suitable solvent for dilution and configure the concentration of working fluid. For the best working concentration, please refer to the relevant literature by yourself, or explore and optimize it through experiments according to the purpose of the experiment and specific cells and animals.

Note

1. After receiving the product, please store it immediately in accordance with the conditions recommended in the manual.
2. Do not shake vigorously with vortexing to avoid protein denaturation and inactivation.
3. This product is for scientific use only.



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