

Active Recombinant Human USP4, His-tagged

Cat. No. USP4-183H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human USP4 (amino acid residues 1-963), fused with N-terminal His, was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	1-963 a.a.
Description	There are two main classes of DUB, cysteine proteases and metalloproteases. Ubiquitin carboxyl-terminal hydrolase 4 (Ubiquitin Specific Protease 4; USP4) is a member of the cysteine protease enzyme family and cloning of the human gene was first described by Gupta et al. (1993). In 1995, USP4 was identified as a proto-oncogene related to USP6, showing a consistently elevated gene expression level in small cell tumours and lung adenocarcinomas suggesting that it may have a possible causative role in neoplasia (Gray et al., 1995). USP4 has been implicated in a number of other processes, including protein quality control in the endoplasmic reticulum and p53 and Wnt signalling. USP4 has also been reported to inhibit the kinase TAK1 that is ubiquitylated by the AKT regulator TRAF6 (Uras et al., 2012).
Form	50 mM HEPES pH 7.5, 150 mM sodium chloride, 2 mM dithiothreitol, 10% glycerol
Bio-activity	Deubiquitylating Enzyme Assay: The activity of His-USP4 was validated by determining the increase in fluorescence measured as a result of the enzyme catalysed cleavage of the fluorogenic substrate Ubiquitin-Rhodamine110-Glycine

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generating Ubiquitin and Rhodamine110-Glycine. Incubation of the substrate in the presence or absence of His-USP4 was compared confirming the deubiquitylating activity of His-USP4.

Molecular Mass	~111 kDa
Purity	>76% by SDS-PAGE
Storage	12 months at -70°C. Avoid multiple freeze/thaw cycles.
Concentration	0.5 mg/ml

GENE INFORMATION

Gene Name	USP4 ubiquitin specific peptidase 4 (proto-oncogene) [Homo sapiens]
Official Symbol	USP4
Synonyms	USP4; ubiquitin specific peptidase 4 (proto-oncogene); ubiquitin specific protease 4 (proto oncogene) , UNP; ubiquitin carboxyl-terminal hydrolase 4; Unph; ubiquitin thioesterase 4; deubiquitinating enzyme 4; ubiquitin thiolesterase 4; ubiquitous nuclear protein homolog; ubiquitin carboxyl-terminal esterase 4; ubiquitin-specific processing protease 4; ubiquitin specific protease 4 (proto-oncogene); UNP; MGC149848; MGC149849;
Gene ID	7375
mRNA Refseq	NM_001251877
Protein Refseq	NP_001238806

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MIM	603486
UniProt ID	Q13107
Chromosome Location	3p21.3
Function	adenosine receptor binding; cysteine-type peptidase activity; peptidase activity; protein binding; ubiquitin thiolesterase activity; ubiquitin-specific protease activity;

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