

## USP33 Protein, Human

<b>Cat. No.:</b>	HY-P701452
<b>Synonyms:</b>	USP33; Ubiquitin carboxyl-terminal hydrolase 33; Deubiquitinating enzyme 33; Ubiquitin thioesterase 33; Ubiquitin-specific-processing protease 33; VHL-interacting deubiquitinating enzyme 1; hVDU1
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	Q8TEY7 (T2-L942)
<b>Gene ID:</b>	23032
<b>Molecular Weight:</b>	

### PROPERTIES

<b>Appearance</b>	Solution.
<b>Formulation</b>	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	Please use rapid thawing with running water to thaw the protein.
<b>Storage &amp; Stability</b>	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
<b>Shipping</b>	Shipping with dry ice.

### DESCRIPTION

<b>Background</b>	<p>USP33 Protein, a pivotal deubiquitinating enzyme, is intricately involved in various cellular processes, exerting influence over centrosome duplication, cellular migration, and the recycling of the beta-2 adrenergic receptor (ADRB2). In the regulation of centrosome duplication, USP33 mediates the deubiquitination of CCP110 during S and G2/M phases, thereby stabilizing CCP110 and facilitating centriole duplication and elongation. Furthermore, its interaction with the intracellular domain of ROBO1 contributes to cell migration, modulating the Slit signaling pathway. USP33 also plays a central role in commissural axon guidance across the ventral midline of the neural tube in a Slit-dependent manner, potentially by deubiquitinating ROBO1. As a key regulator of G-protein coupled receptor (GPCR) signaling, USP33 mediates the deubiquitination of beta-arrestins (ARRB1 and ARRB2) and ADRB2, orchestrating ADRB2 recycling and resensitization after prolonged agonist stimulation. Additionally, it participates in thyroid hormone regulation by deubiquitinating DIO2 and displays versatility by mediating deubiquitination of both 'Lys-48'- and 'Lys-63'-linked polyubiquitin chains, highlighting its central role in cellular homeostasis and signaling pathways.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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