

Datasheet for ABIN388945
anti-USP33 antibody (C-Term)



[Go to Product page](#)

1 Image

Overview

Quantity:	400 µL
Target:	USP33
Binding Specificity:	AA 799-829, C-Term
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This USP33 antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Immunogen:	This VDU1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 799-829 amino acids from the C-terminal region of human VDU1.
Clone:	RB4423-4424
Isotype:	Ig Fraction
Predicted Reactivity:	B
Purification:	This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Target Details

Target:	USP33
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Target Details

Alternative Name: VDU1 ([USP33 Products](#))

Background: Type 2 iodothyronine deiodinase (D2) is an integral membrane selenoenzyme that stimulates the pro-hormone thyroxine (T4) and supplies the majority of the 3,5,3'-triiodothyronine (T3) essential for brain development.¹ T4 catalysis accelerates selective conjugation to ubiquitin and thereby renders D2 inactive, a posttranslational feedback mechanism used to maintain acceptable T3 levels.^{2,3} Ub-D2 was the first recognized substrate for von Hippel-Lindau protein-interacting (pVHL-interacting) deubiquitinating enzyme-1 (VDU1).⁴ VDU proteins colocalize with D2 in the endoplasmic reticulum, and their coexpression provides D2 resistance to degradation. VDU1 expression is substantially upregulated in brown adipocytes by norepinephrine or cold exposure, further amplifying D2 activity. VDU1 and VDU2 are coexpressed with D2 in many human tissues, including brain, heart, and skeletal muscle, suggesting potential roles in neurological development, cardiac function, and energy management, in addition to thermal homeostasis. VDU1- or VDU2-catalyzed deubiquitination recycles inactive Ub-D2 to its active deubiquitinated form, circumventing the proteasomal degradation pathway. Thus, Ub-D2 can be either reactivated or degraded, with the balance between these two processes influenced by VDU activity. VDU1-catalyzed D2 deubiquitination may be an important participant in the adaptive mechanism that regulates thyroid hormone action. The reversible ubiquitination-dependent mechanism regulating D2 activity permits highly responsive control of thyroid hormone activation.^{5,6}

Molecular Weight: 106727

Gene ID: 23032

NCBI Accession: [NP_055832](#), [NP_963918](#), [NP_963920](#)

UniProt: [Q8TEY7](#)

Pathways: [Regulation of G-Protein Coupled Receptor Protein Signaling](#)

Application Details

Application Notes: WB: 1:1000

Restrictions: For Research Use only

Handling

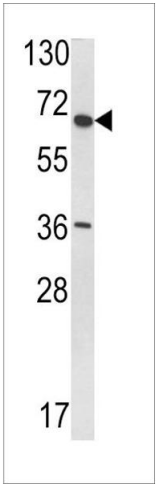
Format: Liquid

Buffer: Purified polyclonal antibody supplied in PBS with 0.09 % (W/V) sodium azide.

Handling

Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Maintain refrigerated at 2-8 °C for up to 6 months. For long term storage store at -20 °C in small aliquots to prevent freeze-thaw cycles.
Expiry Date:	6 months

Images



Western Blotting

Image 1. Western blot analysis of anti-VDU1 Pab (ABIN388945 and ABIN2837879) in T47D cell line lysate (35 µg/lane). VDU1(arrow) was detected using the purified Pab.