

UBE2D1 (C-22): sc-130283

BACKGROUND

UBE2D1 (ubiquitin-conjugating enzyme E2D1 or UBC5A), UBE2D2 (ubiquitin-conjugating enzyme E2D2 or UBC5B) and UBE2D3 (ubiquitin-conjugating enzyme E2D3 or UBC5C) are E2 ubiquitin-conjugating enzymes, components of the protein ubiquitination pathway. Protein ubiquitination covalent modification targets proteins for 26 S proteasome-dependent degradation. Three classes of enzymes influence the conjugation mechanism of ubiquitin to protein. E1 ubiquitin-activating enzymes mediate ATP-dependent charging of ubiquitin via formation of a high energy thiol ester bond between the C-terminus of ubiquitin and a cysteine within itself. Thiol ester-linked ubiquitin is then transferred from E1 to a cysteine residue in an E2 ubiquitin-conjugating enzyme. E2 enzymes in conjunction with E3 ubiquitin-protein ligases transfer ubiquitin monomers and polyubiquitin chains to the substrate target protein, where stable isopeptide linkages are formed.

REFERENCES

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- Gehrke, S.G., et al. 2003. UBCH5A, a member of human E2 ubiquitin-conjugating enzymes, is closely related to SFT, a stimulator of iron transport, and is upregulated in hereditary hemochromatosis. *Blood* 101: 3288-3293.
- Gu, H., et al. 2003. The degradation of promyelocytic leukemia and Sp100 proteins by herpes simplex virus 1 is mediated by the ubiquitin-conjugating enzyme UBCH5A. *Proc. Natl. Acad. Sci. USA* 100: 8963-8968.
- Dominguez, C., et al. 2004. Structural model of the UBCH5B/CNOT4 complex revealed by combining NMR, mutagenesis, and docking approaches. *Structure* 12: 633-644.
- Knutson, M., et al. 2004. Developmental, regional, and cellular expression of SFT/UBCH5A and DMT1 mRNA in brain. *J. Neurosci. Res.* 76: 633-641.
- Saville, M.K., et al. 2004. Regulation of p53 by the ubiquitin-conjugating enzymes UBCH5B/C *in vivo*. *J. Biol. Chem.* 279: 42169-42181.
- Houben, K., et al. 2004. Solution structure of the ubiquitin-conjugating enzyme UBCH5B. *J. Mol. Biol.* 344: 513-526.
- Saxena, K., et al. 2005. Backbone NMR assignment of the human E2 ubiquitin conjugating enzyme UBCH5 α (F72K,F82S) double mutant. *J. Biomol. NMR* 32: 338.

SOURCE

UBE2D1 (C-22) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of UBE2D1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

UBE2D1 (C-22) is recommended for detection of UBE2D1 and, to a lesser extent UBE2D2 and UBE2D3 of mouse and human origin, and to a lesser extent, UBE2D4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

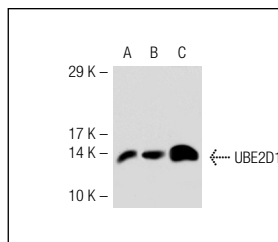
Molecular Weight of UBE2D1: 17 kDa.

Positive Controls: UBE2D3 (h): 293 Lysate: sc-110785, UBE2D1 (m): 293T Lysate: sc-124410 or NIH/3T3 whole cell lysate: sc-2210.

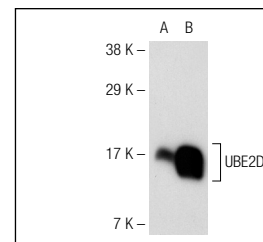
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



UBE2D1 (C-22): sc-130283. Western blot analysis of UBE2D1 expression in non-transfected 293T: sc-117752 (A), mouse UBE2D1 transfected 293T: sc-124410 (B) and NIH/3T3 (C) whole cell lysates.



UBE2D1 (C-22): sc-130283. Western blot analysis of UBE2D3 expression in non-transfected: sc-110760 (A) and human UBE2D3 transfected: sc-110785 (B) 293 whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **UBE2D (C-6): sc-166278**, our highly recommended monoclonal alternative to UBE2D1 (C-22).