

# UBC8 (D-20): sc-16200

## BACKGROUND

Ubiquitin is an abundant, highly conserved protein found in all eukaryotic cells, either free or covalently attached to cellular proteins. The primary function of ubiquitin in mammalian systems is to clear abnormal, foreign and improperly folded proteins by targeting them for proteasome degradation. Ubiquitin conjugating enzyme 8 (UBC8) is an E2 enzyme involved in the ubiquitin pathway for protein degradation. Like other E2 enzymes, UBC8 forms a thioester bond with ubiquitin in an E1-dependent manner. UBC8 binds to the human homolog of *Drosophila ariadne* (HHARI) and UBC7-associated protein (H7-AP1) as well as double ring-finger protein (Dorfin). UBC8 is enriched in the central nervous system and interacts with Parkin, a RING-finger-containing protein implicated in the pathogenesis of familial Parkinson's disease. Parkin shares sequence homology with other UBC8 binding proteins such as HHARI and H7-AP1.

## REFERENCES

1. Ciechanover, A. 1994. The ubiquitin-proteasome proteolytic pathway. *Cell* 79: 13-21.
2. Ciechanover, A., et al. 1994. The ubiquitin-mediated proteolytic pathway: mechanisms of recognition of the proteolytic substrate and involvement in the degradation of native cellular proteins. *FASEB J.* 8: 182-191.
3. Hochstrasser, M. 1995. Ubiquitin, proteasomes and the regulation of intracellular protein degradation. *Curr. Opin. Cell Biol.* 7: 215-223.
4. Kimura, M., et al. 1997. cDNA cloning, characterization, and chromosome mapping of UBE2E2 encoding a human ubiquitin-conjugating E2 enzyme. *Cytogenet. Cell Genet.* 78: 107-111.
5. Moynihan, T.P., et al. 1999. The ubiquitin-conjugating enzymes UBCH7 and UBCH8 interact with RING finger/IBR motif-containing domains of HHARI and H7-AP1. *J. Biol. Chem.* 274: 30963-30968.
6. Tan, N.G., et al. 2000. Characterisation of the human and mouse orthologues of the *Drosophila ariadne* gene. *Cytogenet. Cell Genet.* 90: 242-245.
7. Zhang, Y., et al. 2000. Parkin functions as an E2-dependent ubiquitin-protein ligase and promotes the degradation of the synaptic vesicle-associated protein, CDCrel-1. *Proc. Natl. Acad. Sci. USA* 97: 13354-13359.

## CHROMOSOMAL LOCATION

Genetic locus: Ube2l6 (mouse) mapping to 2 E1.

## SOURCE

UBC8 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of UBC8 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16200 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

UBC8 (D-20) is recommended for detection of UBC8 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for UBC8 siRNA (m): sc-41686, UBC8 shRNA Plasmid (m): sc-41686-SH and UBC8 shRNA (m) Lentiviral Particles: sc-41686-V.

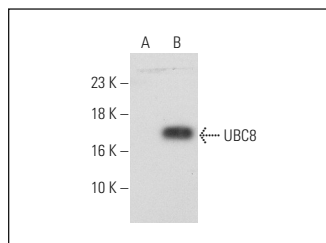
Molecular Weight of UBC8: 19 kDa.

Positive Controls: UBC8 (m2): 293T Lysate: sc-110178, KNRK whole cell lysate: sc-2214 or A-10 cell lysate: sc-3806.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



UBC8 (D-20): sc-16200. Western blot analysis of UBC8 expression in non-transfected: sc-117752 (A) and mouse UBC8 transfected: sc-110178 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Kramer, O.H., et al. 2003. The histone deacetylase inhibitor valproic acid selectively induces proteasomal degradation of HDAC2. *EMBO J.* 22: 3411-3420.

## STORAGE

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