SANTA CRUZ BIOTECHNOLOGY, INC.

E6-AP (H-182): sc-25509

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

E6-associating protein (E6-AP), also designated ubiquitin protein ligase E3A (UBE3A), is a component of the ubiquitin-mediated proteolytic pathway that selectively targets proteins for degradation by the 26S proteasome. Ubiquitin (Ub) is directly conjugated to protein substrates by the transfer of Ub from an E2 ubiquitin conjugating enzyme to the target protein. This conjugation is facilitated by the enzymatic activity of E3 ubiquitin ligase family members such as E6-AP. Several substrates of E6-AP have been identified and include the tumor suppressor protein p53 and the mammalian homolog of Rad23, HHR23A. Previous studies have indicated that E6-AP associates with the human papillomavirus E6 oncogene, which forms a complex with p53 and thereby potentiates E6-AP mediated ubiquitination of p53. Genetic mutations that impair E6-AP activity result in the accumulation of p53 in the cytoplasm, and in many instances, these mutations are associated with the development of the rare neurodevelopmental disorder Angelman syndrome (AS), which is characterized by severe motor dysfunction and mental retardation.

CHROMOSOMAL LOCATION

Genetic locus: UBE3A (human) mapping to 15q11.2; Ube3a (mouse) mapping to 7 C.

SOURCE

E6-AP (H-182) is a rabbit polyclonal antibody raised against amino acids 9-190 of E6-AP of human origin.

PRODUCT

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

APPLICATIONS

E6-AP (H-182) is recommended for detection of E6-AP of mouse, rat and human 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 E6-AP siRNA (h): sc-43742, E6-AP siRNA (m): sc-40682, E6-AP shRNA Plasmid (h): sc-43742-SH, E6-AP shRNA Plasmid (m): sc-40682-SH, E6-AP shRNA (h) Lentiviral Particles: sc-43742-V and E6-AP shRNA (m) Lentiviral Particles: sc-40682-V.

Molecular Weight of E6-AP: 100 kDa.

Positive Controls: IMR-32 nuclear extract: sc-2148, HeLa whole cell lysate: sc-2200 or SK-N-MC nuclear extract: sc-2154.

RESEARCH USE

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

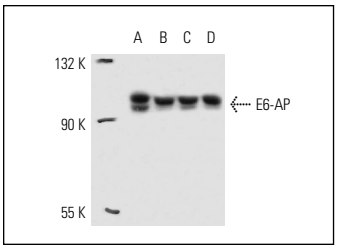
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

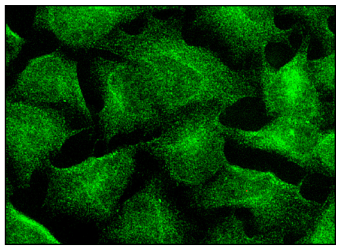
STORAGE

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

DATA



E6-AP (H-182): sc-25509. Western blot analysis of E6-AP expression in IMR-32 (**A**), HeLa (**B**) and SK-N-MC (**C**) nuclear extracts and HeLa whole cell lysate (**D**).



E6-AP (H-182): sc-25509. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

1. Valley, C.C., et al. 2005. Differential regulation of estrogen-inducible proteolysis and transcription by the estrogen receptor α N terminus. Mol. Cell. Biol. 25: 5417-5428.
2. Ganzenmueller, T., et al. 2008. The E7 protein of the cottontail rabbit papillomavirus immortalizes normal rabbit keratinocytes and reduces pRb levels, while E6 cooperates in immortalization but neither degrades p53 nor binds E6AP. Virology 372: 313-324.
3. Muench, P., et al. 2009. Binding of PDZ proteins to HPV E6 proteins does neither correlate with epidemiological risk classification nor with the immortalization of foreskin keratinocytes. Virology 387: 380-387.
4. Shimoji, T., et al. 2009. Identification of annexin A1 as a novel substrate for E6AP-mediated ubiquitylation. J. Cell. Biochem. 106: 1123-1135.
5. Vos, R.M., et al. 2009. The ubiquitin specific peptidase USP15 regulates human papilloma virus 16 E6 protein stability. J. Virol. 83: 8885-8892.
6. Zaaroor-Regev, D., et al. 2010. Regulation of the polycomb protein Ring1B by self-ubiquitination or by E6-AP may have implications to the pathogenesis of Angelman syndrome. Proc. Natl. Acad. Sci. USA 107: 6788-6793.
7. Reiser, J., et al. 2011. High-risk human papillomaviruses repress constitutive κ interferon transcription via E6 to prevent pathogen recognition receptor and antiviral-gene expression. J. Virol. 85: 11372-11380.
8. Howie, H.L., et al. 2011. β-HPV 5 and 8 E6 promote p300 degradation by blocking AKT/p300 association. PLoS Pathog. 7: e1002211.
9. Li, W., et al. 2013. Star-PAP controls HPV E6 regulation of p53 and sensitizes cells to VP-16. Oncogene 33: 928-932.