

## E6-AP (E-5): sc-166532

### 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.

### REFERENCES

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- Haas, A.L., et al. 1997. Pathways of ubiquitin conjugation. *FASEB J.* 11: 1257-1268.
- Yamamoto, Y., et al. 1997. The human E6-AP gene (UBE3A) encodes three potential protein isoforms generated by differential splicing. *Genomics* 41: 263-266.
- Malzac, P., et al. 1998. Mutation analysis of UBE3A in Angelman syndrome patients. *Am. J. Hum. Genet.* 62: 1353-1360.
- Nawaz, Z., et al. 1999. The Angelman syndrome-associated protein, E6-AP, is a co-activator for the nuclear hormone receptor superfamily. *Mol. Cell. Biol.* 19: 1182-1189.
- Mani, A., et al. 2006. E6-AP mediates regulated proteasomal degradation of the nuclear receptor co-activator amplified in breast cancer 1 in immortalized cells. *Cancer Res.* 66: 8680-8686.

### CHROMOSOMAL LOCATION

Genetic locus: UBE3A (human) mapping to 15q11.2.

### SOURCE

E6-AP (E-5) is a mouse monoclonal antibody raised against amino acids 9-190 of E6-AP of human origin.

### PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### APPLICATIONS

E6-AP (E-5) is recommended for detection of E6-AP of human origin by Western Blotting (starting dilution 1:100, 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 shRNA Plasmid (h): sc-43742-SH and E6-AP shRNA (h) Lentiviral Particles: sc-43742-V.

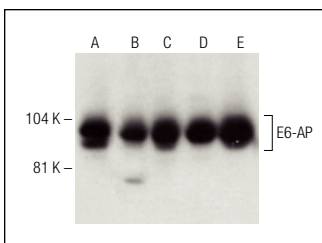
Molecular Weight of E6-AP: 100 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, SK-N-SH cell lysate: sc-2410 or Ramos nuclear extract: sc-2153.

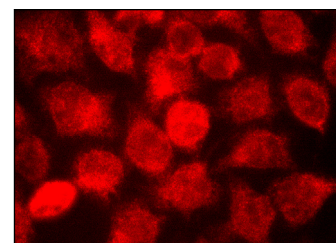
### RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

### DATA



E6-AP (E-5): sc-166532. Western blot analysis of E6-AP expression in SK-N-SH (A), IMR-32 (B), Jurkat (C), K-562 (D) and Ramos (E) nuclear extracts.



E6-AP (E-5): sc-166532. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

### STORAGE

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

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.