

# E6-AP (G-18): sc-12380

## 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

1. Jentsch, S. 1992. The ubiquitin-conjugation system. *Annu. Rev. Genet.* 26: 179-207.
2. Huibregtse, J.M., et al. 1993. Cloning and expression of the cDNA for E6-AP, a protein that mediates the interaction of the human papillomavirus E6 oncoprotein with p53. *Mol. Cell. Biol.* 13: 775-784.
3. Haas, A.L., et al. 1997. Pathways of ubiquitin conjugation. *FASEB J.* 11: 1257-1268.
4. Yamamoto, Y., et al. 1997. The human E6-AP gene (UBE3A) encodes three potential protein isoforms generated by differential splicing. *Genomics* 41: 263-266.

## CHROMOSOMAL LOCATION

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

## SOURCE

E6-AP (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus 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.

Blocking peptide available for competition studies, sc-12380 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

E6-AP (G-18) is recommended for detection of E6-AP isoforms I, II and III 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).

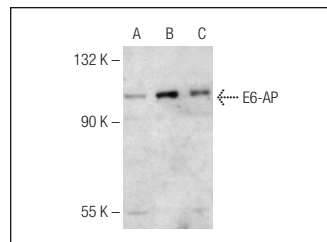
E6-AP (G-18) is also recommended for detection of E6-AP isoforms I, II and III in additional species, including equine and canine.

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: Jurkat whole cell lysate: sc-2204, Ramos cell lysate: sc-2216 or K-562 whole cell lysate: sc-2203.

## DATA



E6-AP (G-18): sc-12380. Western blot analysis of E6-AP expression in K-562 (A), Jurkat (B) and Ramos (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Perissi, V., et al. 2004. A corepressor/coactivator exchange complex required for transcriptional activation by nuclear receptors and other regulated transcription factors. *Cell* 116: 511-526.
2. Singhmar, P. and Kumar, A. 2011. Angelman syndrome protein UBE3A interacts with primary microcephaly protein ASPM, localizes to centrosomes and regulates chromosome segregation. *PLoS ONE* 6: e20397.

## PROTOCOLS

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


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Try **E6-AP (E-4): sc-166689** or **E6-AP (E-5): sc-166532**, our highly recommended monoclonal alternatives to E6-AP (G-18).