

# A1Up (h2): 293T Lysate: sc-117281

## BACKGROUND

A1Up (Ataxin-1 ubiquitin-like-interacting protein), also known as UBQLN4 (ubiquilin 4), C1orf6 or UBIN, is a 601 amino acid protein that localizes to both the cytoplasm and the nucleus and is thought to associate with the endoplasmic reticulum (ER). Expressed at high levels in kidney, pancreas, heart, brain and skeletal muscle and at lower levels in liver, lung and placenta, A1Up functions as a homodimer that binds to signal sequences on proteins that are targeted to the ER. Additionally, A1Up is thought to link Ataxin-1 with ubiquitin/proteasome pathways, possibly assisting in the Ataxin-1-associated formation of multimeric protein complexes within the nucleus. A1Up contains one ubiquitin-like domain and one UBA domain and may be phosphorylated in response to DNA damage.

## REFERENCES

1. Fogli, A., Giglio, S., Arrigo, G., Lo Nigro, C., Zollo, M., Viggiano, L., Rocchi, M., Archidiacono, N., Zuffardi, O. and Carozzo, R. 1999. Identification of two paralogous regions mapping to the short and long arms of human chromosome 2 comprising LIS1 pseudogenes. *Cytogenet. Cell Genet.* 86: 225-232.
2. Davidson, J.D., Riley, B., Burright, E.N., Duvick, L.A., Zoghbi, H.Y. and Orr, H.T. 2000. Identification and characterization of an Ataxin-1-interacting protein: A1Up, a ubiquitin-like nuclear protein. *Hum. Mol. Genet.* 9: 2305-2312.
3. Matsuda, M., Koide, T., Yoriuzzi, T., Hosokawa, N. and Nagata, K. 2001. Molecular cloning of a novel ubiquitin-like protein, UBIN, that binds to ER targeting signal sequences. *Biochem. Biophys. Res. Commun.* 280: 535-540.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605440. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Riley, B.E., Xu, Y., Zoghbi, H.Y. and Orr, H.T. 2004. The effects of the poly-glutamine repeat protein Ataxin-1 on the UbL-UBA protein A1Up. *J. Biol. Chem.* 279: 42290-42301.
6. Matsuoka, S., Ballif, B.A., Smogorzewska, A., McDonald, E.R., Hurov, K.E., Luo, J., Bakalarski, C.E., Zhao, Z., Solimini, N., Lerenthal, Y., Shiloh, Y., Gygi, S.P. and Elledge, S.J. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science* 316: 1160-1166.
7. Li, X., Su, V., Kurata, W.E., Jin, C. and Lau, A.F. 2008. A novel connexin 43-interacting protein, CIP75, which belongs to the UbL-UBA protein family, regulates the turnover of connexin 43. *J. Biol. Chem.* 283: 5748-5759.

## CHROMOSOMAL LOCATION

Genetic locus: UBQLN4 (human) mapping to 1q22.

## PRODUCT

A1Up (h2): 293T Lysate represents a lysate of human A1Up transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## APPLICATIONS

A1Up (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive A1Up antibodies. Recommended use: 10-20 µl per lane.

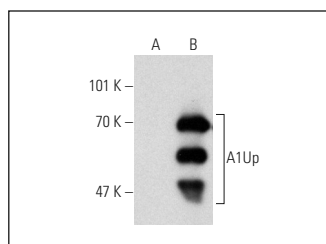
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

A1Up (M398): sc-136146 is recommended as a positive control antibody for Western Blot analysis of enhanced human A1Up expression in A1Up transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

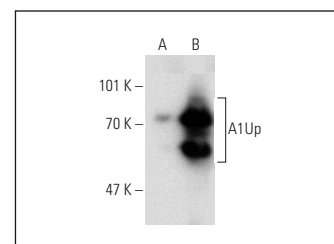
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA



A1Up (M398): sc-136146. Western blot analysis of A1Up expression in non-transfected: sc-117752 (A) and human A1Up transfected: sc-117281 (B) 293T whole cell lysates.



A1Up (L64): sc-136144. Western blot analysis of A1Up expression in non-transfected: sc-117752 (A) and human A1Up transfected: sc-117281 (B) 293T whole cell lysates.

## 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.