

# PLIC-1 (H-20): sc-14652

## BACKGROUND

Proteins linking integrin-associated protein with cytoskeleton (PLICs) provide a signaling connection between the membrane receptors for thrombospondin and the cytoskeleton. The PLIC proteins are part of ubiquitin-like proteins, all of which contain an ubiquitin-like domain. Both PLIC-1 and PLIC-2, known also as ubiquilin 1 and ubiquilin 2, associate with proteasomes and two different E3 ubiquitin ligase enzymes. These associations suggest that PLIC-1 and PLIC-2 may link ubiquitination machinery and proteasomes for *in vivo* protein degradation. PLIC-1 and PLIC-2 both bind to a short peptide within the ATPase domain of the HSP70-like Stch protein. PLIC-1 is a cytoplasmic protein that associates with the DAN gene product and may play a critical role in cell cycle regulation. It also interacts with two proteins linked to early-onset Alzheimer's disease, presenilin-1 and presenilin-2, and promotes accumulation of the presenilin proteins. PLIC-1 is abundant in neurons of healthy brain, neurofibrillary tangles in Alzheimer's-diseased brain and Lewy bodies of Parkinson-diseased brain.

## REFERENCES

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- Kleijnen, M.F., et al. 2000. The hPLIC proteins may provide a link between the ubiquitination machinery and the proteasome. *Mol. Cell* 6: 409-419.
- Mah, A.L., et al. 2000. Identification of ubiquilin, a novel presenilin interactor that increases presenilin protein accumulation. *J. Cell Biol.* 151: 847-862.
- Hanaoka, E., et al. 2000. Molecular cloning and expression analysis of the human DA41 gene and its mapping to chromosome 9q21.2-q21.3. *J. Hum. Genet.* 45: 188-191.
- Kaye, F.J., et al. 2000. A family of ubiquitin-like proteins binds the ATPase domain of Hsp70-like Stch. *FEBS Lett.* 467: 348-355.
- Kaye, F.J., et al. 2000. Assignment of ubiquilin 2 (UBQLN2) to human chromosome Xp11.23-p11.1 by GeneBridge radiation hybrids. *Cytogenet. Cell Genet.* 89: 116-117.

## CHROMOSOMAL LOCATION

Genetic locus: UBQLN1 (human) mapping to 9q21.32.

## SOURCE

PLIC-1 (H-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLIC-1 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-14652 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PLIC-1 (H-20) is recommended for detection of PLIC-1 of 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).

PLIC-1 (H-20) is also recommended for detection of PLIC-1 in additional species, including equine.

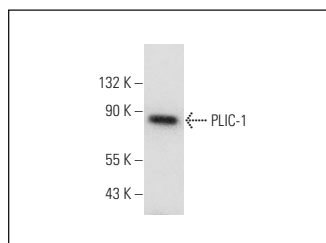
Suitable for use as control antibody for PLIC-1 siRNA (h): sc-41669, PLIC-1 shRNA Plasmid (h): sc-41669-SH and PLIC-1 shRNA (h) Lentiviral Particles: sc-41669-V.

Positive Controls: IMR-32 cell lysate: sc-2409.

## 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



PLIC-1 (H-20): sc-14652. Western blot analysis of PLIC-1 expression in IMR-32 whole cell lysate.

## 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) or our catalog for detailed protocols and support products.