SANTA CRUZ BIOTECHNOLOGY, INC.

ACTL8 (A-4): sc-377372

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ACTL8 (Actin-like protein 8), aslo known as CT57 (cancer/testis antigen 57), is a member of the ARP family of Actin-related proteins that contain an Actin fold and are involved in spindle orientation, nuclear migration and chromatin remodeling events. Localized to the cytoplasm and expressed in the testis and pancreas, ACTL8 is 366 amino acids in length and is encoded by a gene that maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromo-some 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders—cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. Am. J. Hum. Genet. 69: 428-433.
2. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. Cytogenet. Genome Res. 108: 217-222.
3. Chen, Y.T., et al. 2005. Identification of cancer/testis-antigen genes by massively parallel signature sequencing. Proc. Natl. Acad. Sci. USA 102: 7940-7945.
4. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. Anticancer Res. 26: 953-959.

CHROMOSOMAL LOCATION

Genetic locus: ACTL8 (human) mapping to 1p36.13.

SOURCE

ACTL8 (A-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 339-365 at the C-terminus of ACTL8 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACTL8 (A-4) is available conjugated to agarose (sc-377372 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377372 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377372 PE), fluorescein (sc-377372 FITC), Alexa Fluor® 488 (sc-377372 AF488), Alexa Fluor® 546 (sc-377372 AF546), Alexa Fluor® 594 (sc-377372 AF594) or Alexa Fluor® 647 (sc-377372 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377372 AF680) or Alexa Fluor® 790 (sc-377372 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377372 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ACTL8 (A-4) is recommended for detection of ACTL8 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 ACTL8 siRNA (h): sc-88512, ACTL8 shRNA Plasmid (h): sc-88512-SH and ACTL8 shRNA (h) Lentiviral Particles: sc-88512-V.

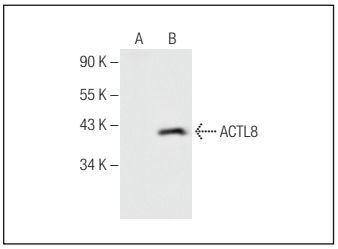
Molecular Weight of ACTL8: 41 kDa.

Positive Controls: ACTL8 (h): 293T Lysate: sc-113876.

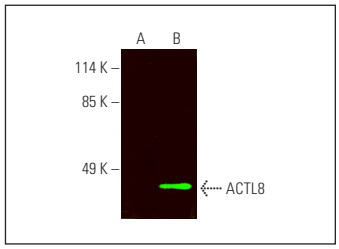
RECOMMENDED SUPPORT REAGENTS

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



ACTL8 (A-4): sc-377372. Western blot analysis of ACTL8 expression in non-transfected: sc-117752 (**A**) and human ACTL8 transfected: sc-113876 (**B**) 293T whole cell lysates.



ACTL8 (A-4): sc-377372. Near-infrared western blot analysis of ACTL8 expression in non-transfected: sc-117752 (**A**) and human ACTL8 transfected: sc-113876 (**B**) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

SELECT PRODUCT CITATIONS

1. Li, B., et al. 2019. High expression of ACTL8 is poor prognosis and accelerates cell progression in head and neck squamous cell carcinoma. Mol. Med. Rep. 19: 877-884.

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.