SANTA CRUZ BIOTECHNOLOGY, INC.

CRYZL1 (B-7): sc-514537

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Crystallins are divided into two classes: taxon-specific, or enzyme, and ubiquitous. The ubiquitous crystallins constitute the major proteins of the vertebrate eye lens, where they maintain the transparency and refractive index of the lens. The taxon-specific crystallins, also designated phylogenetically-restricted crystallins, include λ-, μ-, and ζ-crystallin, which all share homology to various enzymes. ζ-crystallin/quinone reductase is present at low levels in human lens tissue. It has NADPH-dependent quinone reductase activity distinct from other known quinone reductases, and may play a role as a pH response element-binding protein. CRYZL1 (ζ-crystallin-like 1 protein) shares a high degree of homology with ζ-crystallin. CRYZL1 is expressed at various levels in heart, brain, skeletal muscle, kidney, pancreas, liver and lung.

REFERENCES

1. Mulders, J.W., et al. 1988. λ-crystallin, a major rabbit lens protein, is related to hydroxyacyl-coenzyme A dehydrogenases. J. Biol. Chem. 263: 15462-15466.
2. Kim, M.Y., et al. 1999. Identification of a ζ-crystallin (quinone reductase)-like 1 gene (CRYZL1) mapped to human chromosome 21q22.1. Genomics 57: 156-159.
3. Slingsby, C., et al. 1999. Structure of the crystallins. Eye 13: 395-402.
4. Tang, A., et al. 2001. Identification of ζ-crystallin/NADPH:quinone reductase as a renal glutaminase mRNA pH response element-binding protein. J. Biol. Chem. 276: 21375-21380.
5. Horwitz, J. 2003. α-crystallin. Exp. Eye Res. 76: 145-153.
6. Bhat, S.P. 2004. Transparency and non-refractive functions of crystallins—a proposal. Exp. Eye Res. 79: 809-816.
7. Paulin, D., et al. 2004. Desminopathies in muscle disease. J. Pathol. 204: 418-427.

CHROMOSOMAL LOCATION

Genetic locus: CRYZL1 (human) mapping to 21q22.11; Cryzl1 (mouse) mapping to 16 C3.3.

SOURCE

CRYZL1 (B-7) is a mouse monoclonal antibody raised against amino acids 242-312 mapping near the C-terminus of CRYZL1 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.

CRYZL1 (B-7) is available conjugated to agarose (sc-514537 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514537 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514537 PE), fluorescein (sc-514537 FITC), Alexa Fluor® 488 (sc-514537 AF488), Alexa Fluor® 546 (sc-514537 AF546), Alexa Fluor® 594 (sc-514537 AF594) or Alexa Fluor® 647 (sc-514537 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514537 AF680) or Alexa Fluor® 790 (sc-514537 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CRYZL1 (B-7) is recommended for detection of CRYZL1 of mouse, rat and 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 CRYZL1 siRNA (h): sc-91421, CRYZL1 siRNA (m): sc-142601, CRYZL1 shRNA Plasmid (h): sc-91421-SH, CRYZL1 shRNA Plasmid (m): sc-142601-SH, CRYZL1 shRNA (h) Lentiviral Particles: sc-91421-V and CRYZL1 shRNA (m) Lentiviral Particles: sc-142601-V.

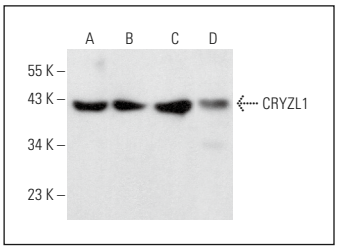
Molecular Weight of CRYZL1: 39 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, KNRK whole cell lysate: sc-2214 or human prostate extract: sc-363774.

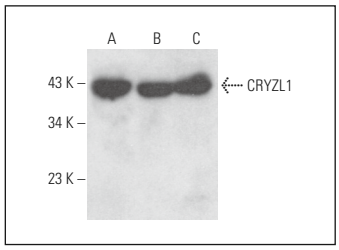
RECOMMENDED SUPPORT REAGENTS

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



CRYZL1 (B-7): sc-514537. Western blot analysis of CRYZL1 expression in HeLa (**A**), HEL 92.1.7 (**B**) and F9 (**C**) whole cell lysates and human prostate tissue extract (**D**).



CRYZL1 (B-7): sc-514537. Western blot analysis of CRYZL1 expression in 3T3-L1 (**A**), C6 (**B**) and KNRK (**C**) whole cell lysates.

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.