

ζ-crystallin (V-20)-R: sc-22427-R

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. λ-crystallin is best described in rabbit, where it shares homology with L-3-hydroxyacyl-CoA dehydrogenase from pig. The human μ-crystallin gene maps to chromosome 16p13, and encodes a protein that is expressed in neural tissue, muscle, and kidney. Unlike other crystallins, μ-crystallin does not perform a structural role in lens tissue, but rather it binds NADPH and thyroid hormone, which indicates that it may have other regulatory or developmental functions. 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.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CRYZ (human) mapping to 1p22; Cryz (mouse) mapping to 3 H4.

SOURCE

ζ-crystallin (V-20)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ζ-crystallin of human origin.

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.

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-22427 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ζ-crystallin (V-20)-R is recommended for detection of ζ-crystallin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ζ-crystallin (V-20)-R is also recommended for detection of ζ-crystallin in additional species, including canine and porcine.

Suitable for use as control antibody for ζ-crystallin siRNA (h): sc-106887, ζ-crystallin siRNA (m): sc-155980, ζ-crystallin shRNA Plasmid (h): sc-106887-SH, ζ-crystallin shRNA Plasmid (m): sc-155980-SH, ζ-crystallin shRNA (h) Lentiviral Particles: sc-106887-V and ζ-crystallin shRNA (m) Lentiviral Particles: sc-155980-V.

Molecular Weight of ζ-crystallin: 35 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.