μ-crystallin (F-11): sc-376687

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 16p12.2, 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 lens tissue, as well as in neuraltissue, muscle, and kidney. Unlike other crystallins, ζ-crystallin is best described in rabbit, where it shares homology to variouseous enzymes.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: CRYM (human) mapping to 16p12.2; Crym (mouse) mapping to 7 F2.

SOURCE
μ-crystallin (F-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 45-85 near the N-terminus of μ-crystallin of human origin.

PRODUCT
Each vial contains 200 µg IgGκ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Blocking peptide available for competition studies, sc-376687 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE
Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No SDS required.

APPLIED USE
μ-crystallin (F-11) is recommended for detection of μ-crystallin 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 μ-crystallin siRNA (h): sc-40466, μ-crystallin siRNA (m): sc-40467, μ-crystallin shRNA Plasmid: sc-40466-SH, μ-crystallin shRNA Plasmid (m): sc-40467-SH, μ-crystallin shRNA (h) Lentiviral Particles: sc-40466-V and μ-crystallin shRNA (m) Lentiviral Particles: sc-40467-V.

Molecular Weight of μ-crystallin: 36 kDa.

Positive Controls: rat kidney extract: sc-2394, Jurkat whole cell lysate: sc-2204 or μ-crystallin (m): 293T Lysate: sc-127847.

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). 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

SELECT PRODUCT CITATIONS

RESEARCH USE
For research use only, not for use in diagnostic procedures.