

RPE (C-14): sc-162124

BACKGROUND

RPE (ribulose-5-phosphate-3-epimerase), also known as RPE2-1, is a 228 amino acid protein belonging to the ribulose phosphate binding superfamily. Ubiquitously expressed but found in highest levels in red blood cells, lymphocytes and fibroblasts, RPE exists as two alternatively spliced isoforms and is encoded by a gene located on human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

REFERENCES

1. Spencer, N. and Hopkinson, D.A. 1980. Biochemical genetics of the pentose phosphate cycle: human ribose 5-phosphate isomerase (RPI) and ribulose 5-phosphate 3-epimerase (RPE). *Ann. Hum. Genet.* 43: 335-342.
2. Karmali, A., et al. 1983. Purification, properties and assay of D-ribulose 5-phosphate 3-epimerase from human erythrocytes. *Biochem. J.* 211: 617-623.

CHROMOSOMAL LOCATION

Genetic locus: RPE (human) mapping to 2q34, LOC729020 (human) mapping to 10q24.33; Rpe (mouse) mapping to 1 C3.

SOURCE

RPE (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RPE 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-162124 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RPE (C-14) is recommended for detection of RPE of mouse, rat and human origin and rcRPE 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).

RPE (C-14) is also recommended for detection of RPE and rcRPE in additional species, including porcine.

Suitable for use as control antibody for RPE siRNA (m): sc-153100, RPE shRNA Plasmid (m): sc-153100-SH and RPE shRNA (m) Lentiviral Particles: sc-153100-V.

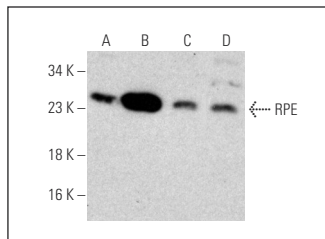
Molecular Weight of RPE: 25 kDa.

Positive Controls: RPE (h): 293T Lysate: sc-111455, Hep G2 cell lysate: sc-2227 or T24 cell lysate: sc-2292.

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



RPE (C-14): sc-162124. Western blot analysis of RPE expression in non-transfected 293T: sc-117752 (A), human RPE transfected 293T: sc-111455 (B), HeLa (C) and Caki (D) 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.

PROTOCOLS

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


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Try **RPE (F-10): sc-393655**, our highly recommended monoclonal alternative to RPE (C-14).