

CROT (E-2): sc-365408

BACKGROUND

CROT (carnitine O-octanoyltransferase), also called COT (carnitine octanoyltransferase), is a member of the carnitine/choline acetyltransferase protein family, which also includes CAT, CPTI, CPTI-M and CPTII. Carnitine/choline acetyltransferase family members are essential for the β -oxidation of fatty acids. CROT localizes to peroxisomes and is highly expressed in liver, kidney and proximal intestinal epithelium. CROT plays a role in lipid metabolism, catalyzing the reversible conversion of acyl-CoAs to their corresponding carnitine esters—a crucial step in facilitating the transport of fatty acids out of peroxisomes to mitochondria, where they can be further degraded. With a preference for straight and branched medium-chain acyl-CoAs (C6-C10 chain length), CROT plays an important role in energy metabolism in eukaryotes. In addition, CROT activity can be inhibited by malonyl-CoA.

REFERENCES

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4. Jogl, G., et al. 2004. Structure and function of carnitine acyltransferases. *Ann. N.Y. Acad. Sci.* 1033: 17-29.
5. Cordente, A.G., et al. 2004. Redesign of carnitine acetyltransferase specificity by protein engineering. *J. Biol. Chem.* 279: 33899-33908.
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CHROMOSOMAL LOCATION

Genetic locus: CROT (human) mapping to 7q21.12; Crot (mouse) mapping to 5 A1.

SOURCE

CROT (E-2) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of CROT of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CROT (E-2) is recommended for detection of CROT of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 CROT siRNA (h): sc-89588, CROT siRNA (m): sc-142579, CROT shRNA Plasmid (h): sc-89588-SH, CROT shRNA Plasmid (m): sc-142579-SH, CROT shRNA (h) Lentiviral Particles: sc-89588-V and CROT shRNA (m) Lentiviral Particles: sc-142579-V.

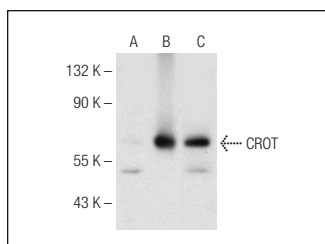
Molecular Weight of CROT: 70 kDa.

Positive Controls: CROT (h): 293T Lysate: sc-115494, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

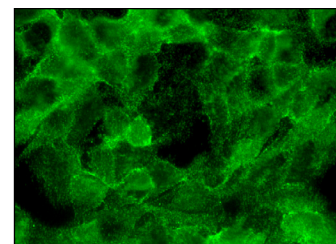
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



CROT (E-2): sc-365408. Western blot analysis of CROT expression in non-transfected 293T: sc-117752 (A), human CROT transfected 293T: sc-115494 (B) and A-431 (C) whole cell lysates.



CROT (E-2): sc-365408. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane and cytoplasmic localization.

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.