

MCR (4i342): sc-71554



The Power to Question

BACKGROUND

Mineralocorticoid hormones are primarily found in epithelial tissues where they function as regulators of Na⁺, K⁺ and H⁺ ion transport. Aldosterone is a mineralocorticoid that has been shown to regulate electrolyte excretion and intravascular volume and is therefore involved in blood pressure regulation. Mineralocorticoid receptor (MCR or MR) is a member of the steroid/thyroid/retinoic nuclear hormone receptor superfamily that has been shown to activate gene transcription in response to aldosterone binding. Regulation of the mineralocorticoid receptors occurs through either receptor downregulation (negative autoregulation) or hormone-mediated upregulation (positive autoregulation). MCR association with HSP 90 appears to be required for hormone binding to MCR and subsequent MCR activation.

REFERENCES

1. Arriza, J.L., et al. 1987. Cloning of human mineralocorticoid receptor complementary DNA: structural and functional kinship with the glucocorticoid receptor. *Science* 237: 268-275.
2. Johnson, J.P. 1992. Cellular mechanisms of action of mineralocorticoid hormones. *Pharmacol. Ther.* 53: 1-29.
3. Schmidt, T.J. and Meyer, A.S. 1994. Autoregulation of corticosteroid receptors. How, when, where and why? *Receptor* 4: 229-257.

CHROMOSOMAL LOCATION

Genetic locus: NR3C2 (human) mapping to 4q31.23; Nr3c2 (mouse) mapping to 8 C1.

SOURCE

MCR (4i342) is a mouse monoclonal antibody raised against aldosterone 3 coupled to BSA.

PRODUCT

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

APPLICATIONS

MCR (4i342) is recommended for detection of MCR of mouse, rat and 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MCR siRNA (h): sc-38836, MCR siRNA (m): sc-38837, MCR shRNA Plasmid (h): sc-38836-SH, MCR shRNA Plasmid (m): sc-38837-SH, MCR shRNA (h) Lentiviral Particles: sc-38836-V and MCR shRNA (m) Lentiviral Particles: sc-38837-V.

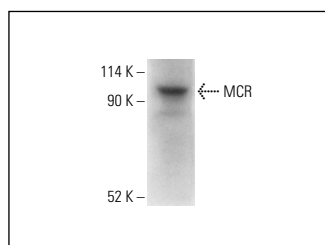
Molecular Weight of MCR: 102 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, mouse kidney extract: sc-2255 or MCF7 whole cell lysate: sc-2206.

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



MCR (4i342): sc-71554. Western blot analysis of MCR expression in MCF7 whole cell lysate. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

SELECT PRODUCT CITATIONS

1. Li, M., et al. 2011. Expression of locus coeruleus mineralocorticoid receptor and glucocorticoid receptor in rats under single-prolonged stress. *Neurol. Sci.* 32: 625-631.
2. Ding, H., et al. 2021. Anti-stress effects of combined block of glucocorticoid and mineralocorticoid receptors in the paraventricular nucleus of the hypothalamus. *Br. J. Pharmacol.* 178: 3696-3707.

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 for detailed protocols and support products.



See **MCR (H10E4C9F): sc-53000** for MCR antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.