

MCR (H10E4C9F): sc-53000

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.

CHROMOSOMAL LOCATION

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

SOURCE

MCR (H10E4C9F) 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.

MCR (H10E4C9F) is available conjugated to agarose (sc-53000 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53000 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53000 PE), fluorescein (sc-53000 FITC), Alexa Fluor® 488 (sc-53000 AF488), Alexa Fluor® 546 (sc-53000 AF546), Alexa Fluor® 594 (sc-53000 AF594) or Alexa Fluor® 647 (sc-53000 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53000 AF680) or Alexa Fluor® 790 (sc-53000 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

MCR (H10E4C9F) 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.

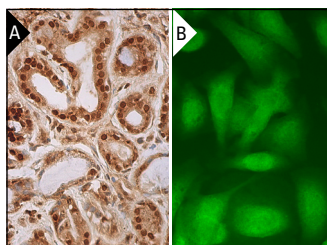
Molecular Weight of MCR: 102 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, mouse kidney extract: sc-2255 or rat kidney extract: sc-2394.

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 (H10E4C9F): sc-53000. Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing nuclear and cytoplasmic staining of glandular cells (A). MCR (H10E4C9F) Alexa Fluor® 488: sc-53000 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear and cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (B).

SELECT PRODUCT CITATIONS

- Reynoso Palomar, A.R., et al. 2017. Expression and biochemical characteristics of two different aldosterone receptors in both healthy and dilated cardiomyopathy dog heart tissue. *Vet. Res. Commun.* 41: 9-14.
- Lee, J.Y., et al. 2021. Aldosterone inhibits *in vitro* myogenesis by increasing intracellular oxidative stress via mineralocorticoid receptor. *Endocrinol. Metab.* 36: 865-874.
- Schena, E., et al. 2023. Mineralocorticoid receptor antagonism prevents type 2 familial partial lipodystrophy brown adipocyte dysfunction. *Cells* 12: 2586.
- Liu, M.Y., et al. 2024. TERT mediates the U-shape of glucocorticoids effects in modulation of hippocampal neural stem cells and associated brain function. *CNS Neurosci. Ther.* 30: e14577.

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.