

MCR (H-300): sc-11412

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 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of MCR 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-11412 X, 200 µg/0.1 ml.

APPLICATIONS

MCR (H-300) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MCR (H-300) is also recommended for detection of MCR in additional species, including equine, canine and porcine.

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.

MCR (H-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of MCR: 102 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

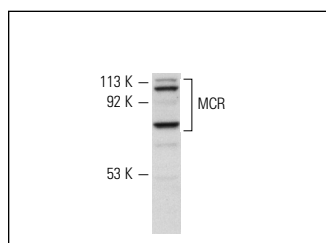
STORAGE

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

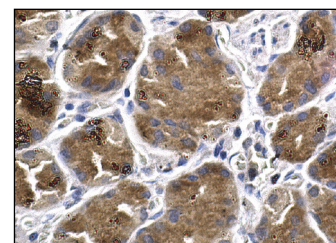
RESEARCH USE

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

DATA



MCR (H-300): sc-11412. Western blot analysis of MCR expression in K-562 whole cell lysate.



MCR (H-300): sc-11412. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Kitagawa, H., et al. 2002. Ligand-selective potentiation of rat mineralocorticoid receptor activation function 1 by a CBP-containing histone acetyltransferase complex. *Mol. Cell. Biol.* 22: 3698-3706.
2. McEneaney, V., et al. 2007. Aldosterone rapidly activates protein kinase D via a mineralocorticoid receptor/EGFR trans-activation pathway in the M1 kidney CCD cell line. *J. Steroid Biochem. Mol. Biol.* 107: 180-190.
3. Kapoor, A., et al. 2008. Molecular regulation of the hypothalamic-pituitary-adrenal axis in adult male guinea pigs after prenatal stress at different stages of gestation. *J. Physiol.* 586: 4317-4326.
4. Lim, H.Y., et al. 2008. Silencing of the mineralocorticoid receptor by ribonucleic acid interference in transgenic rats disrupts endocrine homeostasis. *Mol. Endocrinol.* 22: 1304-1311.
5. Sun, Z., et al. 2008. RNAi inhibition of mineralocorticoid receptors prevents the development of cold-induced hypertension. *Am. J. Physiol. Heart Circ. Physiol.* 294: 1880-1887.
6. Jeong, Y., et al. 2009. Aldosterone activates endothelial exocytosis. *Proc. Natl. Acad. Sci. USA* 106: 3782-3787.
7. Trajkovska, V., et al. 2009. Activation of glucocorticoid receptors increases 5-HT_{2A} receptor levels. *Exp. Neurol.* 218: 83-91.
8. Dunn, E., et al. 2010. Prenatal synthetic glucocorticoid exposure alters hypothalamic-pituitary-adrenal regulation and pregnancy outcomes in mature female guinea pigs. *J. Physiol.* 588: 887-899.
9. Ma, C., et al. 2011. Neuroprotection by histone deacetylase-7 (HDAC7) occurs by inhibition of c-jun expression through a deacetylase-independent mechanism. *J. Biol. Chem.* 286: 4819-4828.



Try **MCR (H10E4C9F): sc-53000**, our highly recommended monoclonal alternative to MCR (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **MCR (H10E4C9F): sc-53000**.