SANTA CRUZ BIOTECHNOLOGY, INC.

MCR (N-17): sc-6860

SANTA CRUZ BIOTECHNOLOGY

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.

CHROMOSOMAL LOCATION

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

SOURCE

MCR (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping to the N-terminus 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-6860 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-6860 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MCR (N-17) 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), 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).

MCR (N-17) is also recommended for detection of MCR in additional species, including equine, canine, bovine, porcine and avian.

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 (N-17) 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.

RESEARCH USE

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

SELECT PRODUCT CITATIONS

1. Reul, J.M., et al. 2000. New mode of hypothalamic-pituitary-adrenocortical axis regulation: significance for stress-related disorders. Z. Rheumatol. 59: 22-25.
2. Reul, J.M., et al. 2000. The brain mineralocorticoid receptor: greedy for ligand, mysterious in function. Eur. J. Pharmacol. 405: 235-249.
3. Sanchez, M.M., et al. 2000. Distribution of corticosteroid receptors in the rhesus brain: relative absence of glucocorticoid receptors in the hippocampal formation. J. Neurosci. 20: 4657-4668.
4. Djelidi, S., et al. 2001. Basolateral translocation by vasopressin of the aldosterone-induced pool of latent Na-K-ATPases is accompanied by α1 subunit dephosphorylation: study in a new aldosterone-sensitive rat cortical collecting duct cell line. J. Am. Soc. Nephrol. 12: 1805-1818.
5. Uhrenholt, T.R., et al. 2003. Rapid inhibition of vasoconstriction in renal afferent arterioles by aldosterone. Circ. Res. 93: 1258-1266.
6. Kitraki, E., et al. 2004. Gender-dependent alterations in corticosteroid receptor status and spatial performance following 21 days of restraint stress. Neuroscience 125: 47-55.
7. Grossmann, C., et al. 2004. Evidence for epidermal growth factor receptor as negative-feedback control in aldosterone-induced Na^+ reabsorption. Am. J. Physiol. Renal Physiol. 286: F1226-F1231.
8. Touyarot, K., et al. 2004. Spatial learning impairment induced by chronic stress is related to individual differences in novelty reactivity: search for neurobiological correlates. Psychoneuroendocrinology 29: 290-305.
9. DeLano, F.A., et al. 2004. Enhancement of glucocorticoid and mineralocorticoid receptor density in the microcirculation of the spontaneously hypertensive rat. Microcirculation 11: 69-78.
10. Amin, M.S., et al. 2005. Distribution of epithelial sodium channels and mineralocorticoid receptors in cardiovascular regulatory centers in rat brain. Am. J. Physiol. Regul. Integr. Comp. Physiol. 289: R1787-R1797.
11. Murai-Takeda, A., et al. 2010. NF-YC functions as a corepressor of agonist-bound mineralocorticoid receptor. J. Biol. Chem. 285: 8084-8093.
12. Sekizawa, N., et al. 2011. Transcriptome analysis of aldosterone-regulated genes in human vascular endothelial cell lines stably expressing mineralocorticoid receptor. Mol. Cell. Endocrinol. 341: 78-88.

STORAGE

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