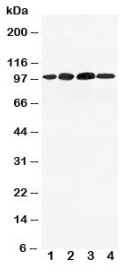
Mineralocorticoid Receptor Antibody (R30672)

Catalog No.	Formulation	Size
R30672	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide/thimerosal
UniProt	P08235
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Mineralocorticoid Receptor antibody is available for research use only.



Western blot testing of Mineralocorticoid Receptor antibody and Lane 1: 293T; 2: SMMC-7721; 3: SW620; 4: HeLa cell lysate. Expected molecular weight ~107/108/94 kDa (isoforms 1/3/4).

Description

NR3C2 (nuclear recepttor subfamily 3, group C, member 2) also known as Mineralocorticoid Receptor (MR), is a protein that in humans is encoded by the NR3C2 gene that is located on chromosome 4q31.1-31.2. It belongs to the nuclear receptor family where the ligand diffuses into cells, interacts with the MR and results in a signal transduction affecting specific gene expression in the nucleus. MR is expressed in many tissues, such as the kidney, colon, heart, central nervous system(hippocampus), brown adipose tissue and sweat glands. In epithelial tissues, its activation leads to the expression of proteins regulating ionic and water transports(mainly the epithelial sodium channel or ENaC, Na+/K+ pump, serum and glucocorticoid induced kinase or SGK1) resulting in the reabsoprtion of sodium, and as a consequence an

increase in extracellular volume, increase in blood pressure, and an excretion of potassium to maintain a normal salt concentration in the body. The protein is activated by mineralocorticoids such as aldosterone and deoxycorticosterone as well as glucocorticoids, like cortisol. In intact animals, the MR is protected from glucocorticoids by co-localization of an enzyme, 11beta-hydroxysteroid dehydrogenase type 2(11beta-HSD2), that converts cortisol to inactive cortisone. It also responds to some progestins. Spironolactone and eplerenone are MR antagonists. Activation of the mineralocorticoid receptor, upon the binding of its ligand aldosterone, results in its translocation to the cell nucleus, homodimerization and binding to hormone response elements present in the promoter of some genes. This results in the complex recruitment of the transcriptional machinery and the transcription into mRNA of the DNA sequence of the activated genes.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the Mineralocorticoid Receptor antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids 966-984 (DQLPKVESGNAKPLYFHRK-human) were used as the immunogen for this Mineralocorticoid Receptor antibody (100% homologous in human, mouse and rat). This sequence is common to isoforms 1, 3 and 4.

Storage

After reconstitution, the Mineralocorticoid Receptor antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.