10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MC2R Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5540b

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q01718
Other Accession	Q8HYN8, Q64326, NP_000520.1
Reactivity	Human
Predicted	Mouse, Pig, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22805
Calculated MW	33927
Antigen Region	261-288

Additional Information

Gene ID	4158
Other Names	Adrenocorticotropic hormone receptor, ACTH receptor, ACTH-R, Adrenocorticotropin receptor, Melanocortin receptor 2, MC2-R, MC2R, ACTHR
Target/Specificity	This MC2R antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 261-288 amino acids of human MC2R.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MC2R Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MC2R (HGNC:6930)
Synonyms	ACTHR

Function	G protein-coupled receptor for corticotropin/ACTH, primarily expressed in adrenal cortex where it plays a key role in the regulation of adrenocortical function (PubMed:1325670, PubMed:17596328, PubMed:36588120). Upon activation, couples to G(s) protein, stimulating adenylate cyclase and activating the cAMP-dependent signaling pathway, the MAPK cascade as well as the PKA pathway, leading to steroidogenic factor 1/NR5A1-mediated transcriptional activation (PubMed:1325670). Activation by ACTH facilitates the release of adrenal glucocorticoids, including cortisol and corticosterone (PubMed:12213892, PubMed:8636348). In addition, MC2R is required for fetal and neonatal adrenal gland development (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Melanocytes and corticoadrenal tissue.

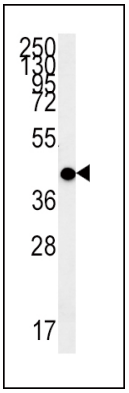
Background

MC2R encodes one member of the five-member G-protein associated melanocortin receptor family. Melanocortins (melanocyte-stimulating hormones and adrenocorticotropic hormone) are peptides derived from pro-opiomelanocortin (POMC). MC2R is selectively activated by adrenocorticotropic hormone, whereas the other four melanocortin receptors recognize a variety of melanocortin ligands.

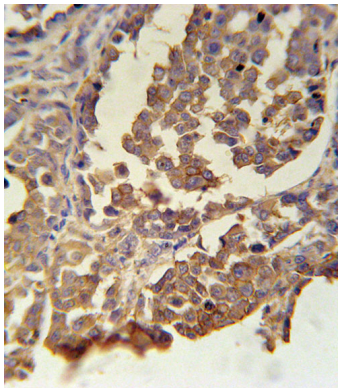
References

Holliday, K.L., et al. Ann. Rheum. Dis. 69(3):556-560(2010)
Ding, Y.X., et al. Pharmacogenet. Genomics 20(2):71-76(2010)
Roy, S., et al. Endocrinology 151(2):660-670(2010)

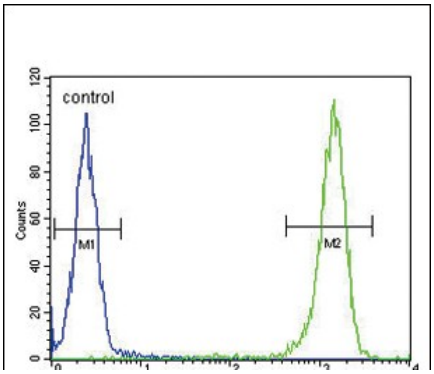
Images



MC2R Antibody (C-term) (Cat. #AP5540b) western blot analysis in WiDr cell line lysates (15ug/lane).This demonstrates the MC2R antibody detected the MC2R protein (arrow).



MC2R Antibody (C-term) (Cat. #AP5540b) immunohistochemistry analysis in formalin fixed and paraffin embedded human skin carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the MC2R Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



MC2R Antibody (C-term) (Cat. #AP5540b) flow cytometric analysis of WiDr cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Colocalization of Wnt/β-Catenin and ACTH Signaling Pathways and Paracrine Regulation in Aldosterone-producing Adenoma
- Steroidogenic enzyme profile in an androgen-secreting adrenocortical oncocytoma associated with hirsutism.

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