ADCYA Rabbit pAb

CatalogNo: YT6551

Key Features

Host Species	Reactivity	Applications
• Rabbit	• Human,Mouse,Rat	• WB

MW	Isotype
• 177kD (Calculated)	• IgG

Recommended Dilution Ratios

WB 1:500-2000

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	Synthesized peptide derived from human ADCYA AA range: 368-418
Specificity	This antibody detects endogenous levels of ADCYA at Human/Mouse/Rat

Target Information

Gene name	ADCY10 SAC

Protein Name ADCYA

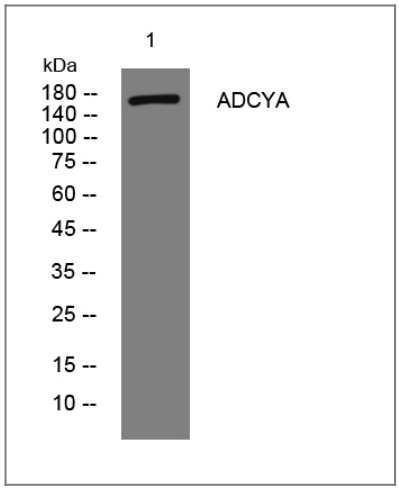
Organism	Gene ID	UniProt ID
Human	55811;	Q96PN6;
Mouse	271639;	Q8C0T9;
Rat	59320;	Q9Z286;

Cellular Localization Cell membrane ; Peripheral membrane protein ; Cytoplasmic side . Cytoplasm, cytoskeleton . Cytoplasm, perinuclear region . Nucleus . Cell projection, cilium . Cytoplasm . Mitochondrion . Distributed to subcellular compartments containing cAMP targets. Found as a plasma membrane-associated protein, protein concentrated in the perinuclear region and protein colocalized with actin or tubulin. .

Tissue specificity Detected in airway epithelial cells and testis (at protein level) (PubMed:17591988). Weakly expressed in multiple tissues. Expressed in brain, heart, kidney, liver, lung, pancreas, peripheral blood leukocytes, placenta, skeletal muscle, stomach, thymus, airway epithelial cells, duodenum, jejunum and ileum. Very low level of expression in bone.

Function Catalytic activity:ATP = 3',5'-cyclic AMP + diphosphate.,cofactor:Binds 2 magnesium ions per subunit.,Disease:Genetic variations in ADCY10 are associated with absorptive hypercalciuria type 2 (HCA2) [MIM:143870]. Absorptive hypercalciuria (AH) is a common cause of calcium oxalate nephrolithiasis. Clinically, AH is characterized by intestinal hyperabsorption of calcium in the presence of normal serum calcium and immunoreactive PTH (iPTH). It is often accompanied by low bone mineral density (BMD), particularly of the lumbar spine. About 50% of patients with AH present with a family history of calcium oxalate nephrolithiasis and hypercalciuria.,enzyme regulation:Activated by manganese or magnesium ions. In the presence of magnesium ions, the enzyme is activated by bicarbonate while in the presence of manganese ions, the enzyme is inhibited by bicarbonate. In the absence of magnesium and bicarbonate, the enzyme is weakly activated by calcium.,Function:Soluble adenylyl cyclase that has a critical role in mammalian spermatogenesis. Produces the cAMP which mediates in part the cAMP-responsive nuclear factors indispensable for maturation of sperm in the epididymis. Induces capacitation, the maturational process that sperm undergo prior to fertilization. May be the bicarbonate sensor. Involved in ciliary beat regulation.,PTM:Cleavage may occur to generate the active 48 kDa form.,similarity:Belongs to the adenylyl cyclase class-4/guanylyl cyclase family.,similarity:Contains 2 guanylate cyclase domains.,subcellular location:Distributed to subcellular compartments containing cAMP targets. Found as a plasma membrane-associated protein, protein concentrated in the perinuclear region and protein colocalized with actin or tubulin.,tissue specificity:Weakly expressed in multiple tissues. Expressed in brain, heart, kidney, liver, lung, pancreas, peripheral blood leukocytes, placenta, skeletal muscle, stomach, thymus, airway epithelial cells, duodenum, jejunum and ileum. Very low level of expression in bone.,

Validation Data



Western blot analysis of lysates from KB cells, primary antibody was diluted at 1:1000, 4°over night

Contact information

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