



Adenylate Cyclase III/ADCY3

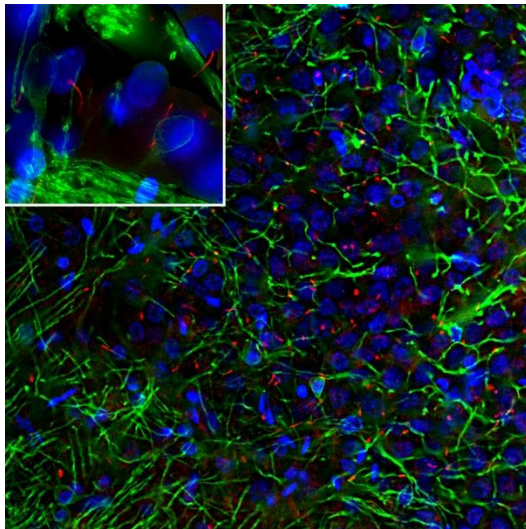
Data Sheet

Catalog Number:	CH22127	Host:	Chicken
Product Type:	Chicken Polyclonal	Species Reactivity:	Rat, Mouse
Immunogen Sequence:	C-terminal peptide of rat ACIII, PAAFPNGSSVTLPHQVVNDP with a Cys added to the N-terminus to allow coupling to KLH.	Format:	Affinity purified antibody at 1.0 mg/mL in 50% PBS, 50% glycerol plus 5mM NaN3
Applications:	Immunofluorescence: 1:5,000-10,000 Immunohistochemistry: 1:5,000-10,000 Western Blot: 1:500-1,000		
Storage:	Dilutions listed as a recommendation. Optimal dilution should be determined by investigator. Antibody can also be aliquotted and stored frozen at -20° C in a manual defrost freezer for six months without detectable loss of activity. The antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Avoid repeated freeze-thaw cycles.		

Application Notes

Description/Data

Trimeric G-proteins are a large and variable family of membrane receptors. On binding their specific ligand they activate specific members of the family of trimeric G-proteins which in turn activate other signalling enzymes. Adenylate cyclases are one of these downstream enzyme families which are activated by the GTP bound GαS subunits of trimeric G-proteins. Adenylate cyclases are responsible for the production of the important "second messenger" signaling molecule cyclic-AMP which in turn activates the cAMP dependent protein kinase, which phosphorylates and regulates numerous other molecules. There are several different adenylate cyclase gene products, the type III adenylate cyclase being specifically localized in neuronal cilia. Much interest has focused on neuronal cilia since they express a variety of receptors and appear to function



as a unique and previously not well understood sensory structure of neurons. For examples, the somatostatin 3 receptor, NPY2 receptor and melanin concentrating hormone receptor 1 are localized in neuronal cilia and the sonic hedgehog and Wnt signalling pathway act primarily through neuronal cilia. This antibody is an excellent marker of neuronal cilia in the brain and in cells in tissue culture and works in the same way as our rabbit polyclonal made against the same peptide.

This antibody was made against the C-terminal peptide of rat ACIII, works on mouse and human cells and is an excellent marker of neuronal cilia in the brain and in cells in tissue culture.

Image: Immunofluorescence analysis of rat cortex section stained with chicken pAb to adenylate cyclase III, CH22127, dilution 1:10,000, in red and costained with mouse mAb to the myelin and oligodendrocyte marker CNP, dilution 1:1,000 in green. The blue is Hoechst staining of nuclear DNA. The ACIII antibody reveals neuronal cilia while the CNP antibody stains oligodendrocytes and the myelin sheath around axons.

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