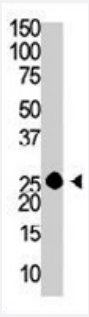
GUCA1A polyclonal antibody

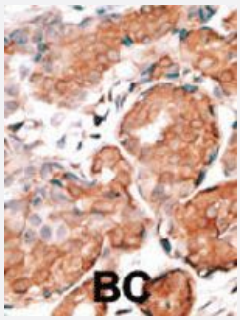
Catalog # PAB3612 Size 400 uL

Applications



Western Blot (Cell lysate)

The GUCA1A polyclonal antibody (Cat # PAB3612) is used in Western blot to detect GUCA1A in Y-79 cell lysate.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Formalin-fixed and paraffin-embedded human cancer tissue reacted with GUCA1A polyclonal antibody (Cat # PAB3612) , which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry ; clinical relevance has not been evaluated. BC = breast carcinoma.

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of GUCA1A.
Immunogen	A synthetic peptide (conjugated with KLH) corresponding to C-terminus of human GUCA1A.
Host	Rabbit
Reactivity	Human
Form	Liquid
Purification	Protein G purification

Recommend Usage	Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) (1:50-100) Western Blot (1:1000) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS (0.09% sodium azide)
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only.

Applications

- Western Blot (Cell lysate)

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Gene Info — GUCA1A

Entrez GeneID	2978
Protein Accession#	P43080
Gene Name	GUCA1A
Gene Alias	COD3, GCAP, GCAP1, GUCA, GUCA1
Gene Description	guanylate cyclase activator 1A (retina)
Omim ID	600364 602093
Gene Ontology	Hyperlink

Gene Summary	This gene plays a role in the recovery of retinal photoreceptors from photobleaching. In the recove ry phase, the phototransduction messeneger cGMP is replenished by retinal guanylyl cyclase-1 (G C1). GC1 is activated by decreasing Ca(2+) concentrations following photobleaching. The protein encoded by this gene, guanylyl cyclase activating protein 1 (GCAP1), mediates the sensitivity of GC1 to Ca(2+) concentrations. GCAP1 promotes activity of GC1 at low Ca(2+) concentrations an d inhibits GC1 activity at high Ca(2+) concentrations. Mutations in this gene cause autosomal do minant cone dystrophy (COD3); a disease characterized by reduced visual acuity associated with progressive loss of color vision. Mutations in this gene prohibit the inactivation of RetGC1 at high Ca(2+) concentrations; causing the constitutive activation of RetGC1 and, presumably, increased cell death. This gene is expressed in retina and spermatagonia. [provided by RefSeq
Other Designations	OTTHUMP00000016397|OTTHUMP00000196466

Publication Reference

- Guanylate cyclase-activating protein (GCAP) 1 rescues cone recovery kinetics in GCAP1/GCAP2 knockout mice.

  Pennesi ME, Howes KA, Baehr W, Wu SM.

  PNAS 2003 May; 100(11):6783.

  Application: IF, IHC-Fr, Mouse, Mouse eyes

- A mutation in guanylate cyclase activator 1A (GUCA1A) in an autosomal dominant cone dystrophy pedigree mapping to a new locus on chromosome 6p21.1.

  Payne AM, Downes SM, Bessant DA, Taylor R, Holder GE, Warren MJ, Bird AC, Bhattacharya SS.

  Human Molecular Genetics 1998 Feb; 7(2):273.

- Molecular characterization of human and mouse photoreceptor guanylate cyclase-activating protein (GCAP) and chromosomal localization of the human gene.

  Subbaraya I, Ruiz CC, Helekar BS, Zhao X, Gorczyca WA, Pettenati MJ, Rao PN, Palczewski K, Baehr W.

  The Journal of Biological Chemistry 1994 Dec; 269(49):31080.

Pathway

- Olfactory transduction

Disease

- Retinal Degeneration

- Retinal Diseases