

Product datasheet for **AP06577PU-S**

Rhodopsin (RHO) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	Western blot: 1/500-1/1000. Immunohistochemistry on paraffin sections 1/50-1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Synthetic peptide, corresponding to amino acids 301-350 of Human Rhodopsin.
Specificity:	This antibody detects endogenous levels of Rhodopsin protein. (region surrounding Leu328)
Formulation:	Phosphate buffered saline (PBS), pH 7.2. State: Aff - Purified State: Liquid purified Ig fraction Preservative: 0.05% sodium azide
Concentration:	1.0 mg/ml
Purification:	Affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 42 kDa
Gene Name:	rhodopsin
Database Link:	Entrez Gene 6010 Human P08100



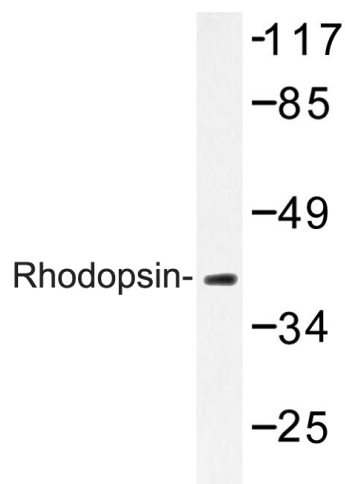
[View online »](#)

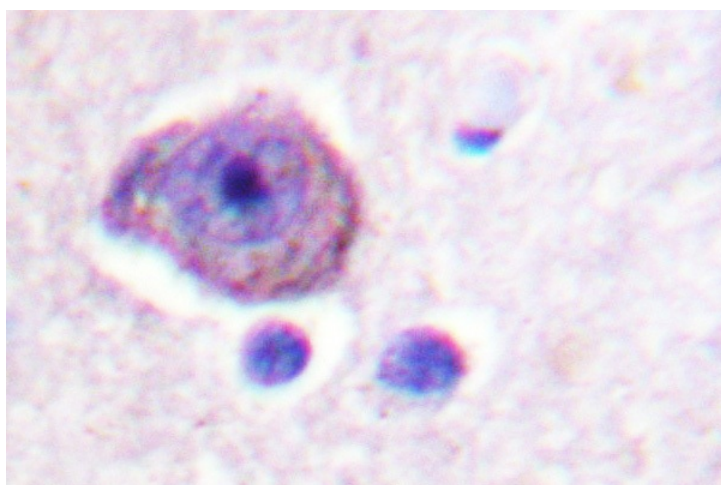
Background:

Retinitis pigmentosa is an inherited progressive disease which is a major cause of blindness in western communities. It can be inherited as an autosomal dominant, autosomal recessive, or X linked recessive disorder. In the autosomal dominant form, which comprises about 25% of total cases, approximately 30% of families have mutations in the gene encoding the rod photoreceptor specific protein rhodopsin. This is the transmembrane protein which, when photoexcited, initiates the visual transduction cascade. Defects in this gene are also one of the causes of congenital stationary night blindness. Vision involves the conversion of light into electrochemical signals that are processed by the retina and subsequently sent to and interpreted by the brain. The process of converting light to an electrochemical signal begins when the membrane-bound protein, rhodopsin, absorbs light within the retina. Photoexcitation of rhodopsin causes the cytoplasmic surface of the protein to become catalytically active. In the active state, rhodopsin activates transducin, a GTP binding protein. Once activated, transducin promotes the hydrolysis of cGMP by phosphodiesterase (PDE). The decrease of intracellular cGMP concentrations causes the ion channels within the outer segment of the rod or cone to close, thus causing membrane hyperpolarization and, eventually, signal transmission. Rhodopsin's activity is believed to be shut off by its phosphorylation followed by binding of the soluble protein arrestin.

Synonyms:

RHO, Opsin-2, OPN2

Product images:



Immunohistochemistry (IHC) analyzes of Rhodopsin antibody in paraffin-embedded human brain tissue.