

Encephalopsin / OPN3 Antibody (Internal)
Rabbit Polyclonal Antibody
Catalog # ALS10524**Specification**

Encephalopsin / OPN3 Antibody (Internal) - Product Information

Application	IHC-P, E
Primary Accession	O9H1Y3
Reactivity	Human, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	45kDa KDa
Dilution	IHC-P~~N/A E~~N/A

Encephalopsin / OPN3 Antibody (Internal) - Additional Information**Gene ID** 23596**Other Names**

Opsin-3, Encephalopsin, Panopsin, OPN3, ECPN

Target/Specificity

Human OPN3 / Encephalopsin. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage

Long term: -70°C; Short term: +4°C

Precautions

Encephalopsin / OPN3 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

Encephalopsin / OPN3 Antibody (Internal) - Protein Information**Name** OPN3**Synonyms** ECPN**Function**

G-protein coupled receptor which selectively activates G proteins via ultraviolet A (UVA) light-mediated activation in the skin (PubMed:28842328, PubMed:31097585, PubMed:31380578). Binds both 11-cis retinal and all-trans retinal (PubMed:31097585). Regulates melanogenesis in melanocytes via inhibition of alpha-MSH-induced MC1R- mediated cAMP signaling, modulation of calcium flux, regulation of

CAMK2 phosphorylation, and subsequently phosphorylation of CREB, p38, ERK and MITF in response to blue light (PubMed:[28842328](http://www.uniprot.org/citations/28842328), PubMed:[31097585](http://www.uniprot.org/citations/31097585)). Plays a role in melanocyte survival through regulation of intracellular calcium levels and subsequent BCL2/RAF1 signaling (PubMed:[31730232](http://www.uniprot.org/citations/31730232)). Additionally regulates apoptosis via cytochrome c release and subsequent activation of the caspase cascade (PubMed:[31730232](http://www.uniprot.org/citations/31730232)). Required for TYR and DCT blue light-induced complex formation in melanocytes (PubMed:[28842328](http://www.uniprot.org/citations/28842328)). Involved in keratinocyte differentiation in response to blue-light (PubMed:[30168605](http://www.uniprot.org/citations/30168605)). Required for the UVA-mediated induction of calcium and mitogen-activated protein kinase signaling resulting in the expression of MMP1, MMP2, MMP3, MMP9 and TIMP1 in dermal fibroblasts (PubMed:[31380578](http://www.uniprot.org/citations/31380578)). Plays a role in light-mediated glucose uptake, mitochondrial respiration and fatty acid metabolism in brown adipocyte tissues (By similarity). May be involved in photorelaxation of airway smooth muscle cells, via blue-light dependent GPCR signaling pathways (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein. Cytoplasm

Tissue Location

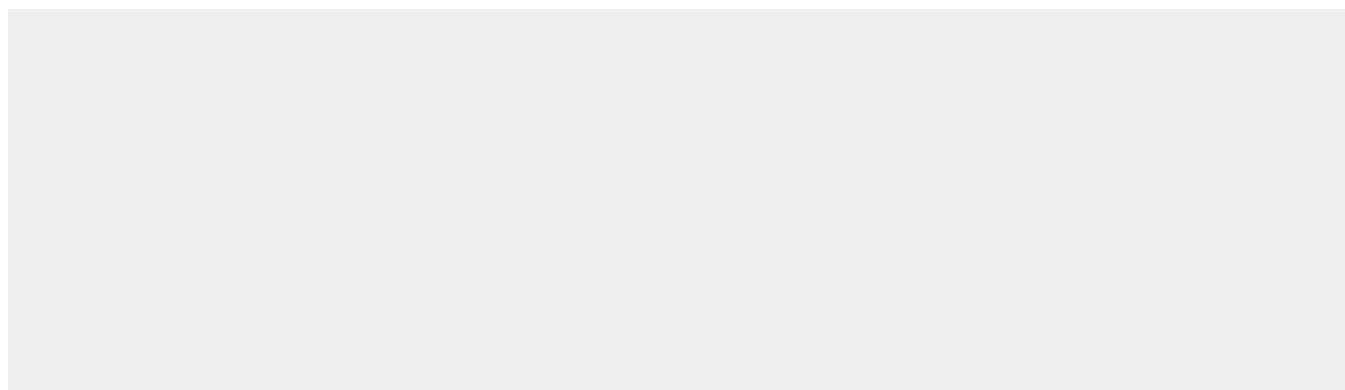
Expressed in tracheal airway smooth muscle (at protein level) (PubMed:30284927). Expressed throughout the epidermis and dermis, predominantly in the basal layer on the facial and abdominal skin (at protein level) (PubMed:30168605). Expressed in dermal fibroblasts (at protein level) (PubMed:31380578). Expressed in melanocytes (at protein level) (PubMed:28842328, PubMed:31097585, PubMed:31730232). Expressed in keratinocytes (PubMed:28842328) Expressed in the retina (PubMed:30284927)

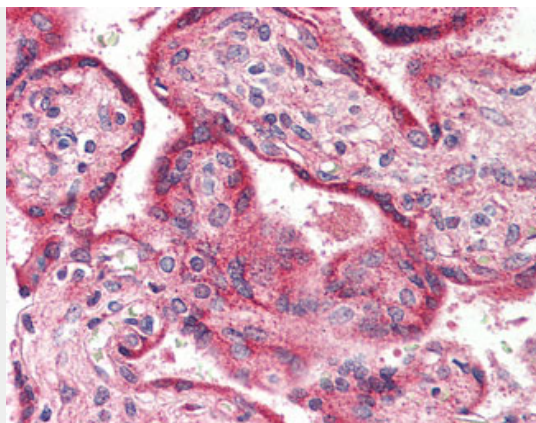
Encephalopsin / OPN3 Antibody (Internal) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Encephalopsin / OPN3 Antibody (Internal) - Images





Anti-OPN3 / Encephalopsin antibody ALS10524 IHC of human placenta.

Encephalopsin / OPN3 Antibody (Internal) - Background

May play a role in encephalic photoreception.

Encephalopsin / OPN3 Antibody (Internal) - References

Blackshaw S.,et al.J. Neurosci. 19:3681-3690(1999).
Halford S.,et al.Genomics 72:203-208(2001).
Kasper G.,et al.Gene 295:27-32(2002).
Gregory S.G.,et al.Nature 441:315-321(2006).