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Encephalopsin / OPN3 Antibody (C-Terminus)

Rabbit Polyclonal Antibody

Catalog # ALS10526

Specification

Encephalopsin / OPN3 Antibody (C-Terminus) - Product Information

Application	**IHC**
Primary Accession	Q9H1Y3
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**45kDa KDa**

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

Encephalopsin / OPN3 Antibody (C-Terminus) - 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:31380578, PubMed:31097585). 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:<a href="http://www.uniprot.org/citations/28842328"

target="_blank">28842328, PubMed:31097585). Plays a role in melanocyte survival through regulation of intracellular calcium levels and subsequent BCL2/RAF1 signaling (PubMed:31730232). Additionally regulates apoptosis via cytochrome c release and subsequent activation of the caspase cascade (PubMed:31730232). Required for TYR and DCT blue light-induced complex formation in melanocytes (PubMed:28842328). Involved in keratinocyte differentiation in response to blue-light (PubMed: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). 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)

Volume
50 µl

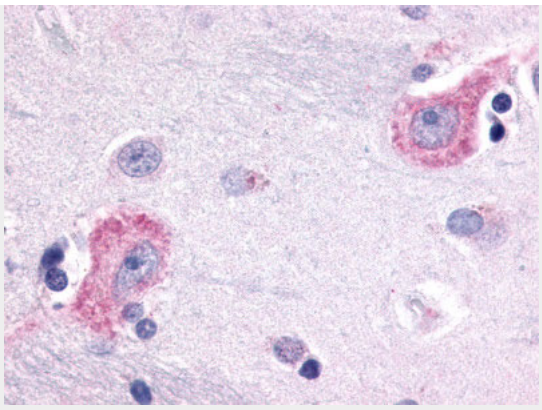
Encephalopsin / OPN3 Antibody (C-Terminus) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Encephalopsin / OPN3 Antibody (C-Terminus) - Images

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Anti-OPN3 / Encephalopsin antibody ALS10526 IHC of human brain, neurons and glia.

Encephalopsin / OPN3 Antibody (C-Terminus) - Background

May play a role in encephalic photoreception.

Encephalopsin / OPN3 Antibody (C-Terminus) - 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).