

Datasheet for ABIN7581929
anti-OPN3 antibody (Extracellular)



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Overview

Quantity:	50 µL
Target:	OPN3
Binding Specificity:	AA 180-194, Extracellular
Reactivity:	Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This OPN3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Live Cell Imaging (LCI), Flow Cytometry (FACS)

Product Details

Purpose:	A Rabbit Polyclonal antibody to Opsin 3 (extracellular)
Immunogen:	(C)DIHGLG(S)TVDWRSKD, corresponding to amino acid residues 180 - 194 of mouse Opsin 3
Sequence:	(C)DIHGLG(S)TVDWRSKD
Isotype:	IgG
Specificity:	Extracellular, 2nd loop.
Predicted Reactivity:	Mouse - 14 out of 15 amino acid identical Rat, human - 12 out of 15 amino acid identical
Characteristics:	Anti-Opsin 3 (extracellular) Antibody (ABIN7581929) is a highly specific antibody directed against an extracellular epitope of the mouse protein. The antibody can be used in western blot, immunohistochemistry and flow cytometry applications. It has been designed to recognize

Product Details

Opsin 3 from mouse, rat and human samples.

Purification: Affinity purified on immobilized antigen.

Target Details

Target: OPN3

Alternative Name: OPN3 ([OPN3 Products](#))

Background: OPN3, Encephalopsin, Panopsin, Opsin 3 (OPN3), also known as encephalopsin or panopsin, is a member of the opsin family, which are light-sensitive G protein-coupled receptors (GPCRs) primarily known for their role in vision. Opsins are found throughout the animal kingdom and while most vertebrates have a similar repertoire of 6-20 genes, mammals most commonly have eight opsins, although humans have nine. Unlike Rhodopsin (or Opsin 2), the founding member of the opsin family, which is located in the retina and is essential for vision in low-light conditions, Opsin 3 has a more widespread expression pattern and functions that extend beyond traditional visual processing. Opsin 3 is expressed in various tissues, including the brain, skin, testes, and lungs, among others. Opsin 3 is abundantly expressed in the skin (a major light sensing organ). The function of Opsin 3 in photodetection and photosensitivity is not clear, but it appears to be based in a light-independent manner and through the interaction with MC1R, another GPCR that is crucial for the regulation of pigmentation in the skin and hair. An intriguing role for Opsin 3 was described in relation to regulation of energy metabolism. Opsin 3 was shown to regulate thermogenesis and lipolysis via a blue-light dependent mechanism in adipose tissue. As mentioned above, Opsin 3 is extensively expressed in several brain regions, including cortex, hippocampus and hypothalamus. Opsin 3 expression in brain regions associated with circadian rhythms, such as the hypothalamus, may suggest a possible role in regulating these rhythms. This connection could influence sleep-wake cycles and other circadian-related functions. In addition, Opsin 3 expression in regions like the hippocampus, a key area for memory and learning, indicates it might play a role in neural development or synaptic plasticity. This could have implications for learning, memory, and other cognitive functions. Finally, Opsin 3 has been detected in several cells of the immune system including T-cells and macrophages, implying that immune responses could be potentially regulated through light-related mechanisms.

Gene ID: 13603

UniProt: [Q9WUK7](#)

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:300 Application Dilutions Western blot wb: 1:200
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	0.2 mL double distilled water (DDW).
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).