

Datasheet for ABIN7556281
OPN3 Protein (AA 1-400) (His tag)



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Overview

Quantity:	1 mg
Target:	OPN3
Protein Characteristics:	AA 1-400
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This OPN3 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant Opn3 Protein expressed in mammalian cells.
Sequence:	<p>MYSGNRSGDQ GYWEDGAGAE GAAPAGTRSP APLFSPTAYE RLALLGCLA LLGVGGNLLV LLLYSKFPRL RTPHLFLVN LSLGDLLVSL FGVTFTFASC LRNGWVWDAV GCAWDGFSGS LFGFVSITTL TVLAYERYIR VVHARVINFS WAWRAITYIW LYSLAWAGAP LLGWNRYILD IHGLGCTVDW RSKDANDSSF VLFLFLGCLV VPGIIAHCY GHILYSVRML RCVEDLQTIQ VIKMLRYEKK VAKMCFLMAF VFLTCWMPYI VTRFLVNGY GHLVTPTVSI VSYLFAKSST VYNPVIYIFM NRKFRRSLLQ LLCFRLLRCQ RPAKNLPAAE SEMHIRPIVM SQKDGDRPKK KVTFNSSSII FIITSDESLS VEDSDRSSAS KVDVIQVRPL Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.</p>
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

Product Details

Characteristics:

Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Purity:

> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)

Grade:

custom-made

Target Details

Target:

OPN3

Alternative Name:

Opn3 ([OPN3 Products](#))

Background:

Opsin-3 (Encephalopsin) (Panopsin),FUNCTION: G-protein coupled receptor which selectively activates G proteins via ultraviolet A (UVA) light-mediated activation in the skin (PubMed:30284927). Binds both 11-cis retinal and all-trans retinal (By similarity). 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 (By similarity). Plays a role in melanocyte survival through regulation of intracellular calcium levels and subsequent BCL2/RAF1 signaling (By similarity). Additionally regulates apoptosis via cytochrome c release and subsequent activation of the caspase cascade (By similarity). Required for TYR and DCT blue light-induced complex formation in melanocytes (By similarity). Involved in keratinocyte differentiation in response to blue-light (By similarity). 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 (By similarity). Plays a role in light-

Target Details

mediated glucose uptake, mitochondrial respiration and fatty acid metabolism in brown adipocyte tissues (PubMed:32040503). May be involved in photorelaxation of airway smooth muscle cells, via blue-light dependent GPCR signaling pathways (PubMed:30284927). {ECO:0000250|UniProtKB:Q9H1Y3, ECO:0000269|PubMed:30284927, ECO:0000269|PubMed:32040503}.

Molecular Weight: 44.9 kDa

UniProt: [Q9WUK7](#)

Application Details

Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months