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Datasheet for ABIN7558122  
**OPN5 Protein (AA 1-377) (His tag)**

## Overview

Quantity:	1 mg
Target:	OPN5
Protein Characteristics:	AA 1-377
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This OPN5 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

## Product Details

Purpose:	Custom-made recombinat Opn5 Protein expressed in mammalien cells.
Sequence:	<p>MALNHTALPQ DERLPHYLRD EDPFASKLSW EADLVAGFYL TIIGILSTFG NGYVLYMSSR RKKKLRPAEI MTINLAVCDL GISVVGKPFIT IISCFCHRWW FGWFGCRWYG WAGFFFGCGS LITMTAVSLD RYLKICYLSY GVWLKRKHAY ICLAVIWAYA SFWTTMPLVG LGDYAPEPFG TSCTLDWWLA QASGGGQVFI LSILFFCLLL PTAVIVFSYA KIIAKVKSSS KEVAHFDSRI HSSHVLEVKL TKVAMLICAG FLIAWIPYAV VSWWSAFGRP DSIPIQLSVV PTLLAKSAAM YNPIIQVID YRFACCQAGG LRGTKKKSLE DFRLHTVTAV RKSSAVLEIH PESSSRFTSA HVMDGESHSN DGDCGKK <b>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.</b></p>
Characteristics:	Key Benefits:

## Product Details

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- 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.

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Purity: > 90 % as determined by Bis-Tris Page, Western Blot

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Grade: custom-made

## Target Details

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Target: OPN5

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Alternative Name: Opn5 ([OPN5 Products](#))

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Background: Opsin-5 (G-protein coupled receptor 136) (G-protein coupled receptor PGR12) (Neuroopsin),FUNCTION: G-protein coupled receptor which selectively activates G(i) type G proteins via ultraviolet A (UVA) light-mediated activation in the retina (PubMed:22043319). Preferentially binds the chromophore 11-cis retinal and is a bistable protein that displays emission peaks at 380 nm (UVA light) and 470 nm (blue light) (PubMed:22043319, PubMed:31607531). Required for the light-response in the inner plexiform layer, and contributes to the regulation of the light-response in the nerve fiber layer, via phosphorylated DAT/SLC6A3 dopamine uptake (PubMed:30936473). Involved in local corneal and retinal circadian rhythm photoentrainment via modulation of the UVA light-induced phase-shift of the retina clock (PubMed:26392540, PubMed:30240620). Acts as a circadian photoreceptor in the outer ear and vibrissal pads, via modulation of circadian clock-gene expression in response to violet light during the light-to-dark transition phase and night phase of the circadian cycle (PubMed:31607531). Required in the retina to negatively regulate hyaloid vessel regression during postnatal development via light-dependent OPN5-SLC32A1-DRD2-VEGFR2 signaling

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## Target Details

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(PubMed:30936473). Involved in the light-dependent regulation of retina and vitreous compartment dopamine levels (PubMed:30936473). {ECO:0000269|PubMed:22043319, ECO:0000269|PubMed:26392540, ECO:0000269|PubMed:30240620, ECO:0000269|PubMed:30936473, ECO:0000269|PubMed:31607531}.

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Molecular Weight: 42.0 kDa

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UniProt: [Q6VZZ7](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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

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Handling Advice: Avoid repeated freeze-thaw cycles.

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: 12 months