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# Product Information

## MemDX™ Membrane Protein Human OPN4 (Opsin 4) Expressed *in vitro E.coli* expression system, Full Length

Cat. No.: **MPX3606K**
This product is for research use only and is not intended for diagnostic use.

This product is a Human OPN4 membrane protein expressed *in vitro E.coli* expression system. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

## Product Specifications

**Host Species**
Human

**Target Protein**
OPN4

**Protein Length**
Full Length

**Protein Class**
GPCR

**TMD**
7

**Sequence**
MNPPSGPRVPPSPTQEPSCMATPAPPSWWDSSQSSISSLGRLPSISPTAPGTWAAAWVPLPTVDVPDHAHYTLGTVILLVGLTGM

## Product Description

**Expression Systems**
*in vitro E.coli* expression system

**Tag**
10xHis tag at the N-terminus

**Protein Format**
Soluble

**Form**
Liquid or Lyophilized powder

**Buffer**

Tris/PBS-based buffer, 6% Trehalose, pH 8.0

### Storage

Aliquot and store at -20°C or lower. For long term storage, we recommend to store at -70°C or lower. Avoid freeze/thaw cycles.

## Target

### Target Protein

OPN4

### Full Name

Opsin 4

### Introduction

Opsins are members of the guanine nucleotide-binding protein (G protein)-coupled receptor superfamily. This gene encodes a photoreceptive opsin protein that is expressed within the ganglion and amacrine cell layers of the retina. In mouse, retinal ganglion cell axons expressing this gene projected to the suprachiasmatic nucleus and other brain nuclei involved in circadian photoentrainment. In mouse, this protein is coupled to a transient receptor potential (TRP) ion channel through a G protein signaling pathway and produces a physiologic light response via membrane depolarization and increased intracellular calcium. The protein functions as a sensory photopigment and may also have photoisomerase activity. Experiments with knockout mice indicate that this gene attenuates, but does not abolish, photoentrainment. Alternative splicing results in multiple transcript variants encoding different isoforms.

### Alternative Names

OPN4; MOP; melanopsin; Opsin 4

### Gene ID

94233

### UniProt ID

Q9UHM6

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