

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Melanopsin in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 628737
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	NS0 mouse myeloma cell line transfected with human Melanopsin Accession # Q9UHM6
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

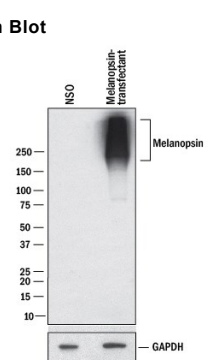
## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	2 µg/mL	NS0 mouse myeloma cell line transfected with human Melanopsin
<b>Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

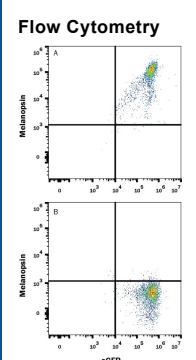
## DATA

**Western Blot**



**Detection of Human Melanopsin by Western Blot.** Western blot shows lysates of NS0 mouse myeloma cell line either mock transfected or transfected with human Melanopsin. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human Melanopsin Monoclonal Antibody (Catalog # MAB10497) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Melanopsin at approximately 200-350 kDa (as indicated). GAPDH is shown as a loading control. This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

**Flow Cytometry**



**Detection of Melanopsin in HEK293 Human Cell Line Transfected with Human Melanopsin and eGFP by Flow Cytometry.** HEK293 human embryonic kidney cell line transfected with either (A) Human Melanopsin or (B) irrelevant protein and eGFP was stained with Mouse Anti-Human Melanopsin Monoclonal Antibody (Catalog # MAB10497) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on control antibody staining (Catalog # MAB003). Staining was performed using our Staining Membrane-associated Proteins protocol.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Melanopsin is an opsin-like protein found in the retinal ganglion cells of mammals. Melanopsin is believed to be part of a secondary optical system that parallels that of the classic rod and cone system. This second system reports directly to the suprachiasmatic nucleus and is responsible for regulation of circadian rhythms. Melanopsin is believed to be the primary photopigment responsible for the regulation of these circadian rhythms, and Melanopsin knockout mice have been generated which demonstrate decreased capacity to entrain to light and dark cycles.