

## Optineurin Protein, Human (sf9, His)

Cat. No.:	HY-P701320
Synonyms:	Optineurin; FIP-2; HIP-7; TFIIIA-IntP; OPTN; GLC1E; HYPL; NRP
Species:	Human
Source:	Sf9 insect cells
Accession:	Q96CV9 (M1-I577)
Gene ID:	10133
Molecular Weight:	68.0 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 $\mu$ m filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<p>Optineurin protein plays a pivotal role in maintaining the Golgi complex, orchestrating membrane trafficking, and regulating exocytosis through its interactions with myosin VI and Rab8. Its linkage of myosin VI to the Golgi complex is integral to Golgi ribbon formation. Furthermore, Optineurin contributes to the activation of the innate immune response during viral infection by recruiting TBK1 to the Golgi apparatus, facilitating its trans-phosphorylation upon stimulation by RLR or TLR3. Activated TBK1, in turn, phosphorylates downstream partner IRF3, leading to the production of IFN-beta/IFNB1. In a neuroprotective role, particularly in the eye and optic nerve, Optineurin regulates membrane trafficking and cellular morphogenesis within a complex involving Rab8 and huntingtin. Additionally, Optineurin serves as an autophagy receptor, interacting with cargo destined for degradation, including ubiquitin-coated bacteria (xenophagy). Notably, it may be targeted by various viruses to inhibit the innate immune response, indicating its multifaceted functions in cellular homeostasis and defense mechanisms.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA