# Data Sheet (Cat.No.TMPJ-00821)

TargetMol

## OM Protein, Human, Recombinant (His)

### General Information

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|---|---|
| Synonyms: | Oncomodulin-1;OCM;OM;OCMN;Parvalbumin Beta;Parvalbumin β;OCM1 |
| Protein Construction: | Met1-Ser109 |
| Species: | Human |
| Expression Host: | E. coli |
| Accession: | P0CE72 |
| Molecular Weight: | 16 KDa (reducing condition) |
| AA Sequence: | Met1-Ser109 |

### QC Testing

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|---|---|
| Biological Activity: | Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first. |
| Purity: | Greater than 95% as determined by reducing SDS-PAGE. (QC verified) |
| Endotoxin: | < 0.1 ng/μg (1 EU/μg) as determined by LAL test. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris-HCl, 100 mM NaCl, pH 8.0. |

### Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Oncomodulin-1 (OM) is a small, calcium-binding protein and a macrophage-derived growth factor, which can promote axon regeneration in retinal ganglion cells. Oncomodulin-1 is constitutively secreted by activated macrophages in the vitreous and retina in response to inflammatory conditions that promote optic nerve regeneration. Oncomodulin-1 binds RGCs with high affinity in vitro, but only when cAMP is pharmacologically elevated or if the membrane is permeabilized allowing Oncomodulin-1 access to the cytosolic compartment.

Oncomodulin-1 is a member of the superfamily of calmodulin proteins and is a high-affinity calcium ion-binding protein and contains 2 EF-hand domains. OM is found in early embryonic cells in the placenta and also in tumors. It has some calmodulin-like activity with respect to enzyme activation and growth regulation.

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