# Data Sheet (Cat.No.TMPY-03785)

TargetMol

## PLBL2/PLBD2 Protein, Human, Recombinant (His)

### General Information

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|---|---|
| Synonyms: | phospholipase B domain containing 2;P76 |
| Protein Construction: | A DNA sequence encoding the human PLBD2 (Q8NHP8) (Met1-Asp589) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Ile 42 |
| Species: | Human |
| Expression Host: | HEK293 Cells |
| Accession: | Q8NHP8 |
| Molecular Weight: | 62.7 kDa (predicted); 68,46 and 34 kDa (reducing conditions) |

### QC Testing

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| Biological Activity: | Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first. |
| Purity: | >95 % as determined by SDS-PAGE |
| Endotoxin: | < 1.0 EU/μg of the protein as determined by the LAL method. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization. |

### Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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

PLBD2 localizes to the lysosome, as its absence could plausibly lead to a serious yet unrecognized lysosomal storage disease. PLBD1 and PLBD2 are semi-orphans in the sense of being probable phospholipases of B class but with uncertain physiological substrates and thus functionalities. PLBD1 and PLBD2 constitute a small gene family (sequence homology class) within vertebrates though one that occurs expanded in some early diverging eukaryotes. PLBD2 presents a special difficulty in that a sequence of post-translational steps are apparently

necessary for its activation. Without these, potential substrates can hardly be assayed. These steps include removal of the signal peptide, mannosylation appropriate to the lysosome targeting receptor, and self-catalytic proteolytic activation to expose the substrate binding site as this becomes appropriate.

Reference

Morgan CP. et al., 2004), Biochem J. 382 (2): 441-9.
Kim W. et al., 2011, Mol Cell. 44 (2): 325-40.
Havugimana PC. et al., 2012. Cell. 150 (5): 1068-81.



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