

## TEM7 Protein, Human, Recombinant (His)

### General Information

Synonyms:	TEM3;plexin domain containing 1;TEM7
Protein Construction:	A DNA sequence encoding the human PLXDC1 (AAH36059.1) extracellular domain (Met 1-Thr 426) was expressed, with a polyhistidine tag at the C-terminus Predicted N terminal: Leu 19
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAH36059.1
Molecular Weight:	47 kDa (predicted); 65-70 kDa (reducing condition, due to glycosylation)

### QC Testing

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:	> 90 % 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

Plexin domain-containing protein 1, also known as tumor endothelial marker 3, tumor endothelial marker 7 and PLXDC1 and TEM3, is a secreted, cytoplasm and single-pass type I membrane protein that belongs to the plexin family. PLXDC1 / TEM3 is detected in endothelial cells from colorectal cancer, and in endothelial cells from primary cancers of the lung, liver, pancreas, breast and brain. It is expressed in fibrovascular membrane with increased expression in individuals with proliferative diabetic retinopathy. PLXDC1 / TEM3 is not detectable in endothelial

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cells from normal tissue. PLXDC1 / TEM3 plays a critical role in endothelial cell capillary morphogenesis. PLXDC1 / TEM3 may play a significant role in the proliferation and maintenance of neovascular endothelial cells in the formation of fibrovascular membranes (FVMs). PLXDC1 / TEM3 may be a molecular target for new diagnostic and therapeutic strategies for proliferative diabetic retinopathy (PDR). PLXDC1 / TEM3 interacts with NID1. It may also interact with CTTN.

### Reference

- Beatty,R.M. et al., 2007,J Neurooncol. 81 (3):241-8.  
Miller,S.F. et al., 2007, Gene Expr Patterns. 7 (5):635-44.  
Yamaji,Y. et al., 2008, Invest Ophthalmol Vis Sci. 49 (7):3151-7.

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