

## HEPACAM2 Protein, Rat, Recombinant (His)

### General Information

Synonyms:	HEPACAM family member 2;HepaCAM2
Protein Construction:	A DNA sequence encoding the rat HepaCAM2 (B5DEN8) (Met1-Leu350) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Leu 33
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	B5DEN8
Molecular Weight:	36.7 kDa (predicted); 60 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:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m 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

HEPACAM2 (HEPACAM Family Member 2) is a Protein Coding gene. This gene encodes a protein related to the immunoglobulin superfamily that plays a role in mitosis. Knockdown of this gene results in prometaphase arrest, abnormal nuclear morphology, and apoptosis. HepaCAM2, together with HEPACAM1, are cell adhesion molecules. HEPACAM1 modulates cell adhesion and migration. It also inhibits cancer cell growth. HepaCAM2 contains 2 Ig-like C2-type (immunoglobulin-like) domains. The immunoglobulin domain is a type of protein domain that consists of

a 2-layer sandwich of between 7 and 9 antiparallel  $\beta$ -strands arranged in two  $\beta$ -sheets with a Greek key topology. Members of the immunoglobulin superfamily are found in hundreds of proteins of different functions.

### Reference

Moh MC, et al. (2008) Expression of hepaCAM is downregulated in cancers and induces senescence-like growth arrest via a p53/p21-dependent pathway in human breast cancer cells. *Carcinogenesis*. 29(12):2298-305.

Moh MC, et al. (2005) Structural and functional analyses of a novel ig-like cell adhesion molecule, hepaCAM, in the human breast carcinoma MCF7 cells. *J Biol Chem*. 280(29):27366-74.

Chung Moh M, et al. (2005) Cloning and characterization of hepaCAM, a novel Ig-like cell adhesion molecule suppressed in human hepatocellular carcinoma. *J Hepatol*. 42(6):833-41.

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