

## Vimentin Protein, Human, Recombinant (His)

### General Information

Synonyms:	CTRCT30;HEL113;vimentin
Protein Construction:	A DNA sequence encoding the human VIM (Met1-Glu466) (P08670) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Met 1
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P08670
Molecular Weight:	55.11 kDa (predicted)

### 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/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 40% acetonitrile, 0.1% TFA. 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:**  
Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

**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

Vimentin is a type III intermediate filament (IF) protein found in various non-epithelial cells, especially mesenchymal cells. A vimentin monomer, has a central  $\alpha$ -helical domain and carboxyl (tail) domains. Two monomers compose the basic subunit of vimentin assembly. Vimentin is crucial for supporting and anchoring the position of the organelles in the cytosol. Vimentin provided cells with a resilience absent from the microtubule or actin filament networks, when under mechanical stress in vivo. Therefore, in general, it is accepted that vimentin is

the cytoskeletal component responsible for maintaining cell integrity. Vimentin is also responsible for stabilizing cytoskeletal interactions. It is found that vimentin control the transport of low-density lipoprotein. It has been used as a sarcoma tumor marker to identify mesenchyme.

### Reference

Russell SM,et al.(1993) Interleukin-2 receptor gamma chain: a functional component of the interleukin-4 receptor. Science. 262 (5141): 1880-3.

Miyazaki T,et al.(1994) Functional activation of Jak1 and Jak3 by selective association with IL-2 receptor subunits. Science. 266 (5187): 1045-7.

Takeshita T,et al.(1992) Cloning of the gamma chain of the human IL-2 receptor. Science. 257 (5068): 379-82.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481