

## SEMA4D Protein, Human, Recombinant (His)

### General Information

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| Synonyms:             | CD100;COLL4;C9orf164;semaphorin 4D;SEMAJ;coll-4;M-sema-G   |
| Protein Construction: | A DNA sequence encoding the human SEMA4D (AAH54500.1) extracellular domain (Met 1-Arg 734) was expressed, with a polyhistidine tag at the C-terminus. Predicted N terminal: Met 22 |
| Species:              | Human  |
| Expression Host:      | HEK293 Cells   |
| Accession:            | AAH54500.1   |
| Molecular Weight:     | 80.7 kDa (predicted); 110 kDa (reducing condition, due to glycosylation)   |

### QC Testing

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| Biological Activity: | Measured by its ability to bind mouse CD45 hFc in functional ELISA.  |
| Purity:              | > 92 % 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

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| 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.<br><small>Actual storage temperature shall be subject to the COA.</small> |

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| Shipping: | In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice. |
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### Protein Background

Semaphorin 4D (SEMA4D or CD100) is a member of the semaphorin family of proteins and an important mediator of the movement and differentiation of multiple cell types, including those of the immune, vascular, and nervous systems. VEGF and SEMA4D had a positive correlation with the malignant degree of ovarian cancer, and SEMA4D can serve as an independent prognostic factor. SEMA4D was the first semaphorin described to have immune functions and serves important roles in T cell priming, antibody production, and cell-to-cell adhesion. Proteolytic

cleavage of SEMA4D from the cell surface gives rise to a soluble fragment of SEMA4D (sSEMA4D). Similar to the transmembranal form, sSEMA4D is thought to have immunoregulatory properties.

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