

**DESCRIPTION**

<b>Source</b>	Human embryonic kidney cell, HEK293-derived human Mesothelin protein		
	Human Mesothelin (Glu296-Gly580) Accession # AAH09272.1	IEGRMD	Human IgG <sub>1</sub> (Pro100-Lys330)
	N-terminus		C-terminus
<b>N-terminal Sequence Analysis</b>	Glu296		
<b>Predicted Molecular Mass</b>	59 kDa		

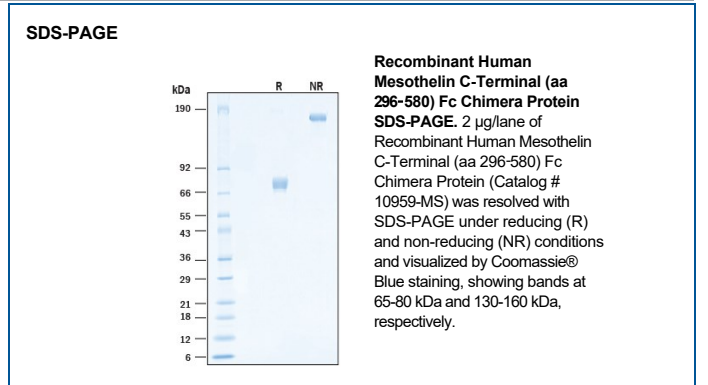
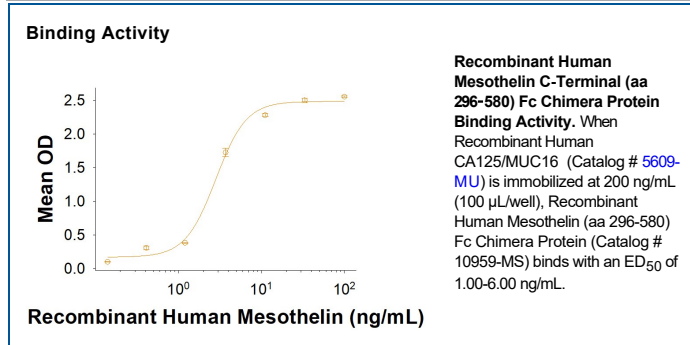
**SPECIFICATIONS**

<b>SDS-PAGE</b>	65-80 kDa, reducing conditions.
<b>Activity</b>	Measured by its binding ability in a functional ELISA. When Recombinant Human CA125/MUC16 (Catalog # 5609-MU) is immobilized at 200 ng/mL (100 µL/well), Recombinant Human Mesothelin (aa 296-580) Fc Chimera binds with an ED <sub>50</sub> of 1.00-6.00 ng/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 1.00 mg/mL in PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**DATA**



**BACKGROUND**

Mesothelin (MSLN), also known as CAK1 and ERC, is a glycosylated cell-surface antigen present on normal mesothelial cells and over-expressed in several human tumors (1, 2). The mesothelin gene encodes a ~70 kDa precursor protein that is cleaved at a dibasic proteolytic site into a 40 kDa membrane-bound protein termed MSLN and a 31 kDa shed fragment called megakaryocyte-potentiating factor (MPF) that is released from the cell (3, 4). Cleaved, human MSLN remains attached to the cell surface via a GPI linkage and shares 58% amino acid sequence identity with mouse and rat MSLN. In human, alternate splicing generates additional MSLN isoforms that have either an eight amino acid insertion following Ser408 or a substituted C-terminal region with no GPI anchor (3). Mesothelin is normally expressed on mesothelial cells in the pleura, pericardium, and peritoneum as well as in the developing and postnatal pancreas (1, 4). It is up-regulated in mesotheliomas and a range of carcinomas and adenomas (5-7). Mesothelin promotes tumor cell proliferation, migration, anchorage-independent growth, and tumor progression (7, 8). It is co-expressed with the tumor antigen CA125/MUC16 on advanced ovarian adenocarcinomas and interacts with this molecule to support cell adhesion (9). A soluble form of Mesothelin is released from tumor cells into the serum or tissue effusions (9-11).

**References:**

1. Hassan, R. *et al.* (2004) Clin. Cancer Res. **10**:3937.
2. Chang, K. and I. Pastan (1996) Proc. Natl. Acad. Sci. **93**:136.
3. Muminova, Z.E. *et al.* (2004) BMC Cancer **4**:19.
4. Hou, L.-Q. *et al.* (2008) Develop. Growth Differ. **50**:531.
5. Ordonez, N.G. (2003) Mod. Pathol. **16**:192.
6. Argani, P. *et al.* (2001) Clin. Cancer Res. **7**:3862.
7. Li, M. *et al.* (2008) Mol. Cancer Ther. **7**:286.
8. Uehara, N. *et al.* (2008) Mol. Cancer Res. **6**:186.
9. Rump, A. *et al.* (2004) J. Biol. Chem. **279**:9190.
10. Ho, M. and M.O. Lively (2006) Cancer Epidemiol. Biomarkers Prev. **15**:1751.
11. Robinson, B.W.S. *et al.* (2003) Lancet **362**:1612.