

**DESCRIPTION**

<b>Source</b>	Human embryonic kidney cell, HEK293-derived human Ly6D protein		
	Human Ly6D (Leu21-Asn98) Accession # Q14210	GGGS	Human IgG <sub>1</sub> (Pro100-Lys330)
	N-terminus		C-terminus
<b>N-terminal Sequence Analysis</b>	Leu21		
<b>Structure / Form</b>	Disulfide-linked homodimer		
<b>Predicted Molecular Mass</b>	35 kDa		

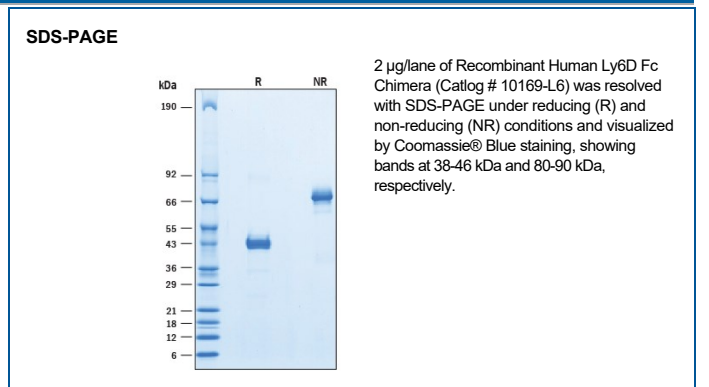
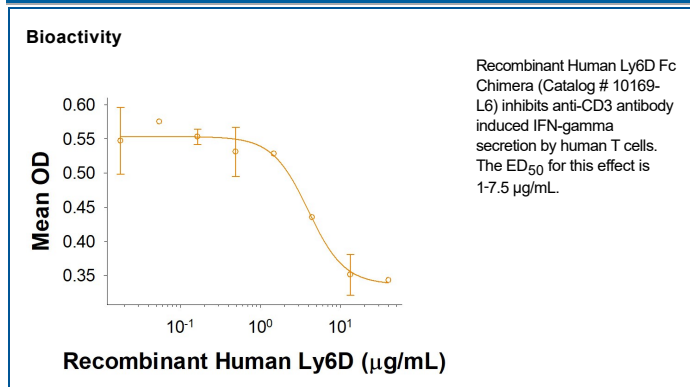
**SPECIFICATIONS**

<b>SDS-PAGE</b>	38-46 kDa, under reducing conditions
<b>Activity</b>	Measured by its ability to inhibit anti-CD3 antibody induced IL-2 or IFN-gamma secretion by human T cells. The ED <sub>50</sub> for this effect is 1-7.5 µg/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 with Trehalose. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 200 µg/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**

Ly6D (Lymphocyte antigen 6D), also known as E48 antigen, is a member of the lymphostromal cell membrane Ly6 protein superfamily (1, 2). There are at least twenty different human Ly6 proteins that have been identified, ranging from 11 to 36 kDa. These are classified as either secreted, or membrane-bound proteins which have the GPI-anchor signaling sequence. Included in the GPI-anchored cell surface glycoproteins are Ly6A-I and Ly6K (2-4). Human Ly6D is synthesized as a 128 amino acid (aa) protein that includes a 20 aa signal peptide, a 78 aa Ly6D chain, and a 30 aa propeptide. Within the main chain region, human Ly6D shares 64% and 58% aa sequence identity with mouse and rat Ly6D, respectively. Ly6D expression is significantly increased in bladder, brain and CNS, breast, head and neck, gastric, lung, ovarian, pancreatic, colorectal and kidney cancer than their counterpart normal tissues. High Ly6D expression is correlated with poor clinical outcome in brain and CNS, pancreatic, and colorectal, breast, colorectal, lung, gastric and ovarian cancer (4). LY6D is a progenitor marker that liaises intrinsically castration-resistant luminal cells and castration-resistant prostate tumor growth (5). LY6D is associated with an aggressive phenotype of ER-positive breast carcinoma, and these are potent markers for distant metastasis of ER-positive breast cancer patients (6).

**References:**

1. Gumley, T.P. *et al.* (1995) *Immunol. Cell Biol.* **73**:277.
2. Lv, Y. *et al.* (2018) *Cell. Physiol. Biochem.* **45**:1219.
3. Kong, H.K. and J.H. Park. (2012) *BMB Rep.* **45**:595.
4. Luo, L. *et al.* (2016) *Oncotarget* **7**:11165.
5. Barros-Silva JD, *et al.* (2018) *Cell Rep.* **25**:3504
6. Mayama A *et al.* (2018) *Cancer Sci.* **109**:3350.