

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human Ly6K protein		
	Human Ly6K (Asp18-Gly138) Accession # Q17RY6.2	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Asp18		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	41 kDa		

SPECIFICATIONS

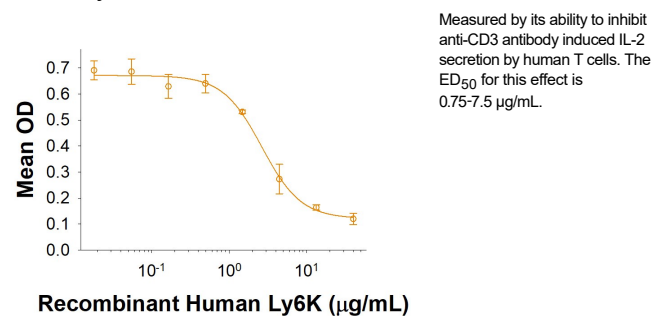
SDS-PAGE	41-61 kDa, under reducing conditions
Activity	Measured by its ability to inhibit anti-CD3 antibody induced IL-2 or IFN-gamma secretion by human T cells. The ED ₅₀ for this effect is 0.75-7.5 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

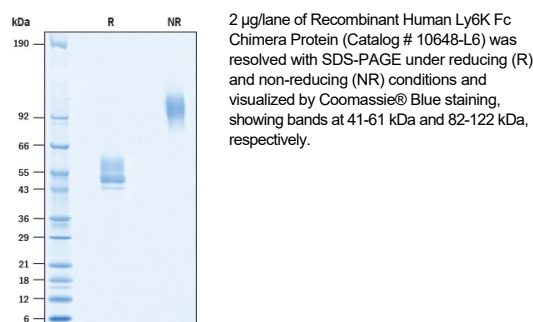
Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



SDS-PAGE



BACKGROUND

Lymphocyte antigen 6 complex, locus K (Ly6K) is a member of the LY6/urokinase-type plasminogen activator receptors (uPARS) family which participate in a wide range of functions from cell proliferation and migration to cytokine production (1). In humans, there are over 30 Ly6/uPARS members, characterized by a conserved, three-fingered disulfide linked LU domain that creates structural motif and a glycosylphosphatidylinositol (GPI)-anchoring site (2, 3). Members of the family are categorized as transmembrane or secretory depending on the presence of a GPI-anchored signal sequence. Mature LY6K contains an extracellular domain (ECD) with a single LU domain and a GPI-anchoring site. Within the ECD, human Ly6K shares 39% and 36% amino acid sequence identity with mouse and rat Ly6K, respectively. Human Ly6K is strongly expressed in testis and is crucial for the production of fertile spermatozoa (4). Additionally, Ly6K has been shown to be upregulated in a number of types of cancer and promotes tumor cell proliferation and metastasis and is a potential cancer therapy target (5). Furthermore, Ly6K promotes glioblastoma tumorigenicity via caveolin-1-mediated ERK1/2 signaling (6). The over-expression of Ly6K suppresses T cell development in the *in vivo* mouse model (7).

References:

1. Loughner, C.L. *et al.* (2016) Hum Genomics. **10**:10.
2. Upadhyay, G. (2019) Front. Immunol. **10**:819.
3. Song, D. *et al.* (2018) Oncol. Lett. **17**:379.
4. Endo S. *et al.* (2016) Sci. Rep. **6**:23616.
5. Benti, S. *et al.* (2020) Cancers **12**:509.
6. Sastry, N.G. *et al.* (2020) Neuro-Oncology. **22**:1315.
7. Son D. *et al.* (2019) Oncol. Lett. **17**:379.