PRODUCT INFORMATION

Target	IL-7
Synonyms	Interleukin-7;IL-7;IL7
Description	Recombinant Human Interleukin-7 is produced by our E.coli expression system and the target gene encoding Asp26-His177 is expressed.
Delivery	In Stock
Uniprot ID	P13232
Expression Host	E.coli
Tag	
Molecular Characterization	Not available
Molecular Weight	17.5 KDa
Purity	Greater than 95% as determined by reducing SDS-PAGE.
Formulation & Reconstitution	Lyophilized from a 0.2 μm filtered solution of 20mM PB, 300mM NaCl, pH 8.0.
Storage & Shipping	Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.
Background	Human Interleukin 7 (IL-7) is a potent lymphoid cell growth factor stimulating the proliferation of lymphoid progenitors. IL7 can associate with the hepatocyte growth factor (HGF) to form a hybrid cytokine that functions as a pre-pro-B cell growth-stimulating factor. Human IL7 cDNA encodes a 177 amino acid precursor protein containing a 25 amino acid signal peptide and a 152 amino acid mature protein. Human and mouse IL7 share 65% sequence identity in the mature region and both exhibit cross-species activity. IL-7 signals via IL-7 receptor (IL7R) activating multiple pathways including JaK/STAT and PI3K/AKT, which regulate lymphocyte survival, glucose uptake, proliferation, and differentiation. IL-7 is also associated with cytoplasmic IL2-R gamma for signal transduction.
Usage	Research use only
Conjugate	Unconjugated

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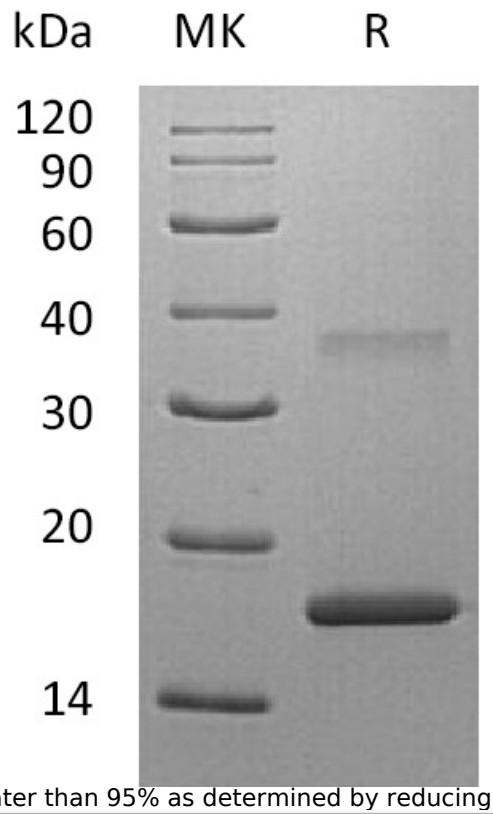

Figure 1. Greater than 95% as determined by reducing SDS-PAGE.

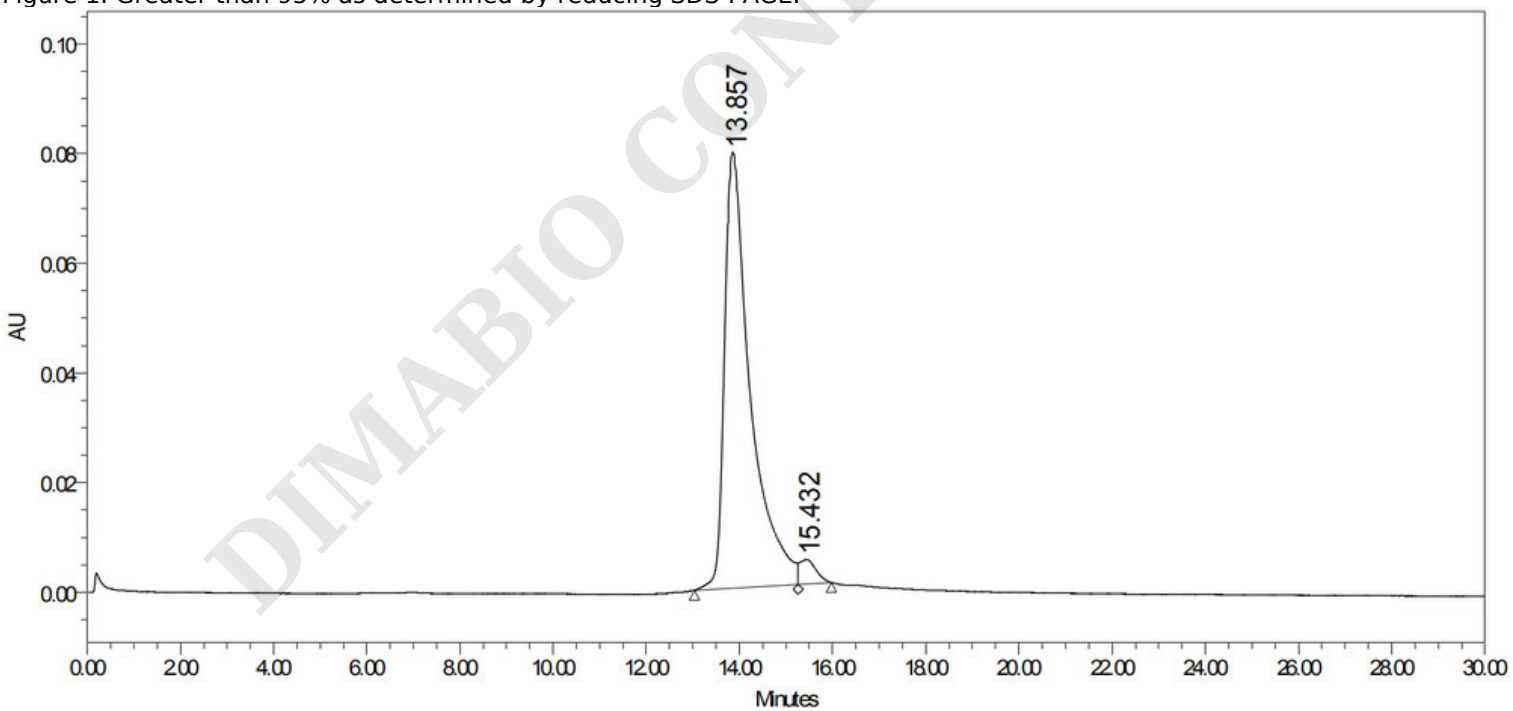

Figure 2. Greater than 95% as determined by SEC-HPLC. (Regularly tested)

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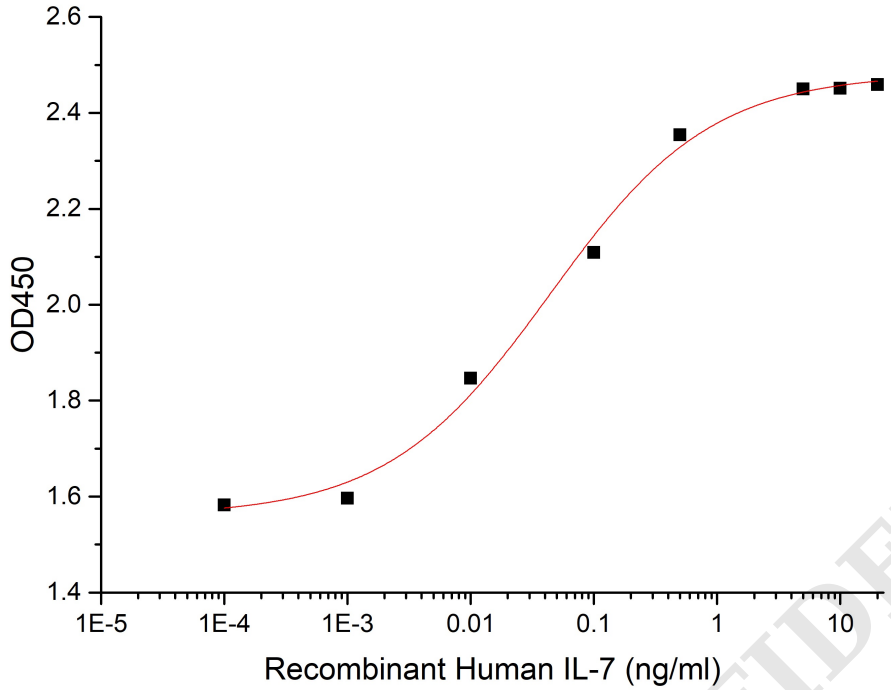

Figure 3. Measured in a cell proliferation assay using PHA-activated human peripheral blood lymphocytes (PBL). The ED50 for this effect is 0.02-0.08 ng/ml. (QC verified)

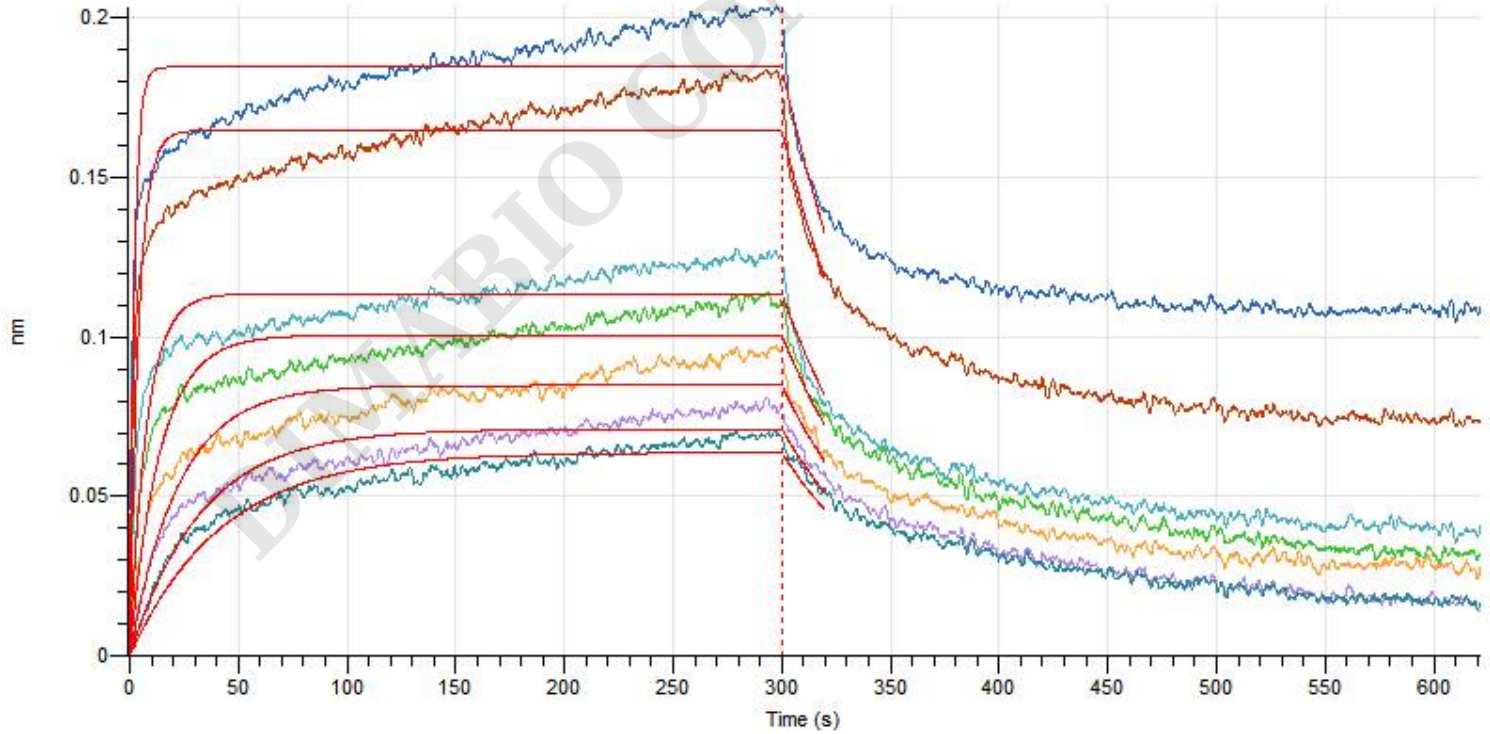

Figure 4. Loaded Human IL-7RA-His on HIS1K Biosensor, can bind Human IL-7 with an affinity constant of 15.04 nM as determined in BLI assay.

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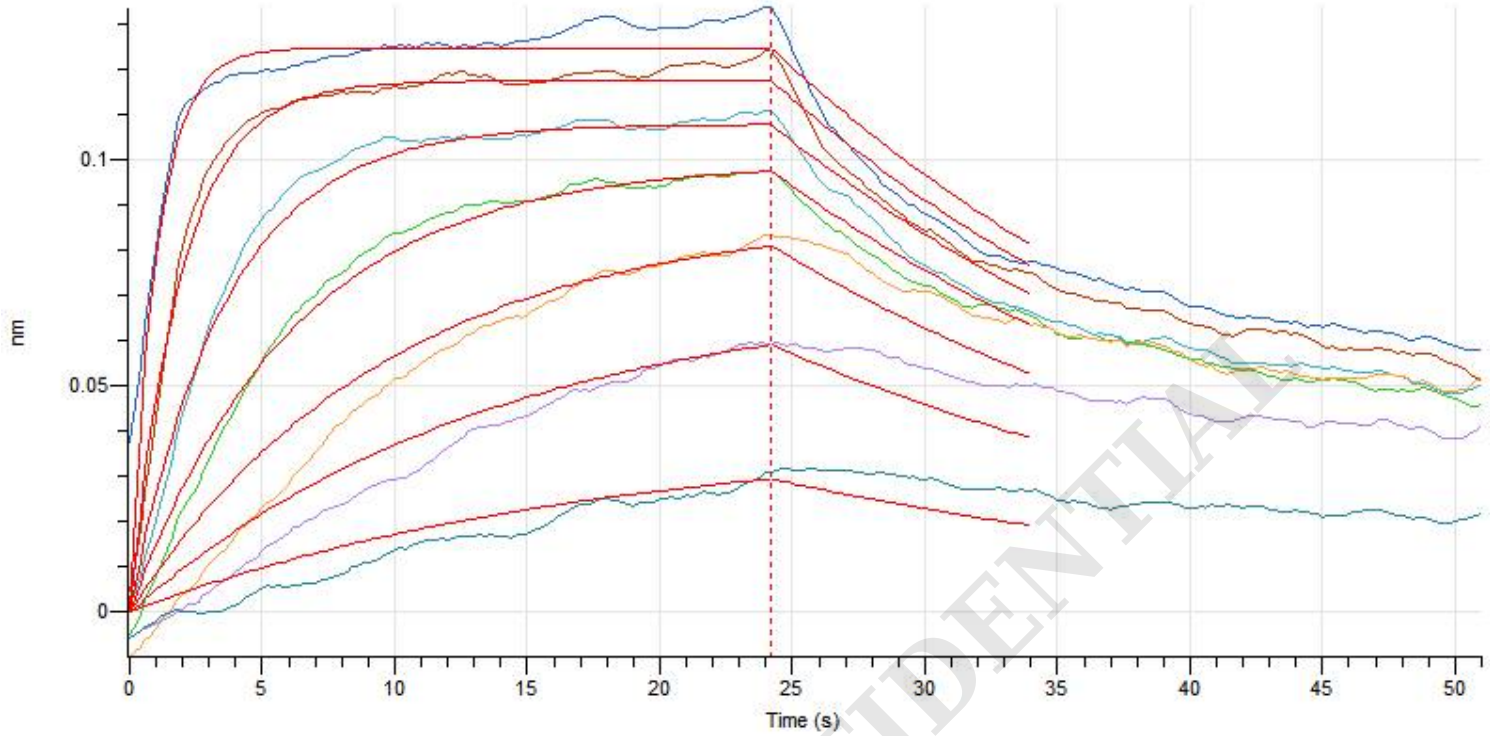

Figure 5. Loaded Human IL-7RA-Fc-His on HIS1K Biosensor, can bind Human IL-7 with an affinity constant of 18.59 nM as determined in BLI assay.

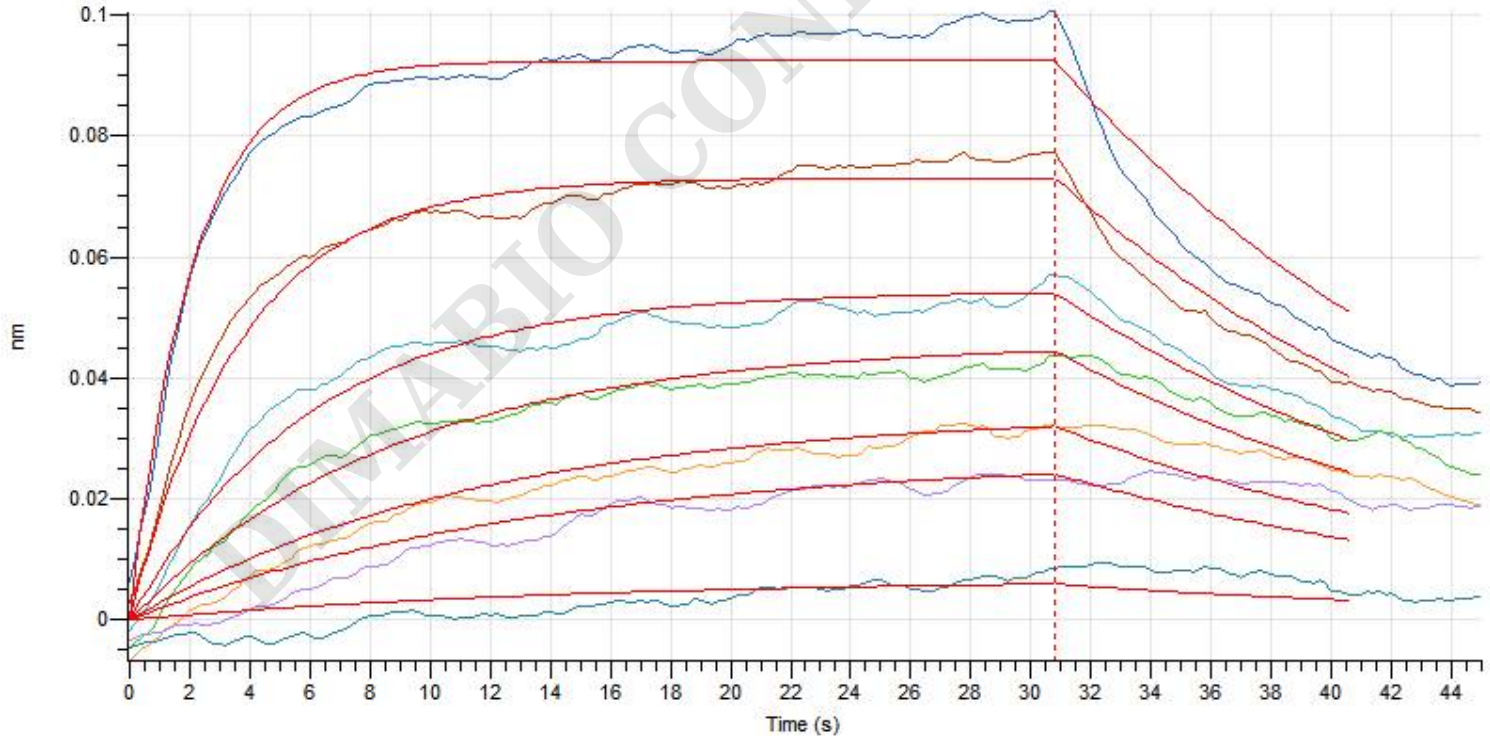

Figure 6. Loaded Mouse IL-7RA-Fc on Protein A Biosensor, can bind Human IL-7 with an affinity constant of 29.2 nM as determined in BLI assay.

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