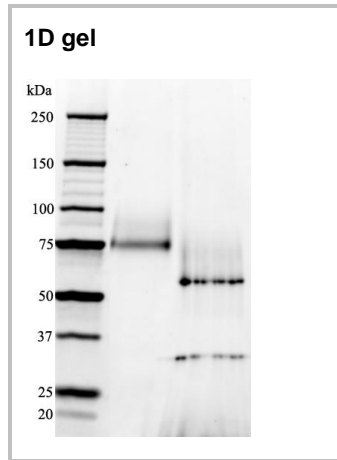


## human cell expressed IL-7 R alpha- Fc<sup>HCX</sup> Chimera

<b>Source</b>	A DNA sequence encoding the signal peptide and extracellular domain of human Interleukin 7 receptor alpha chain (IL-7Ra)(aa 1-236) was fused to the Fc region of human IgG1 (aa 93-330). The chimeric protein was expressed in modified human 293 cells.
<b>Molecular Mass</b>	Symansis IL-7 R alpha-Fc <sup>HCX</sup> Chimera migrates as a broad band between 75 and 90 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with the unmodified IL-7 R alpha-Fc Chimera that has a predicted molecular mass of 50.0kDa.
<b>pI</b>	Symansis IL-7 R alpha-Fc <sup>HCX</sup> Chimera separates into a number of isoforms with a pI between 5.9 and 7.4 in 2D PAGE due to post-translational modifications, in particular glycosylation. This compares with the unmodified IL-7 R alpha-Fc Chimera that has a predicted pI of 6.34.
<b>% Carbohydrate</b>	Symansis purified IL-7 R alpha-Fc <sup>HCX</sup> Chimera consists of 30-45% carbohydrate by weight.
<b>Glycosylation</b>	Symansis IL-7 R alpha-Fc <sup>HCX</sup> Chimera is N-glycosylated and may be O-glycosylated.
<b>Purity</b>	>95%, as determined by SDS-PAGE and visualized by silver stain.
<b>Formulation</b>	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
<b>Reconstitution</b>	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
<b>Storage</b>	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.
<b>Background Information</b>	<p>Interleukin 7 (IL-7) is a cytokine that is essential for lymphopoiesis as well as T cell homeostasis and the maintenance of T cell diversity. Additionally, IL-7 promotes T cell cytolytic responses, and acts as co-stimulator for the activation of mature B cells.</p> <p>The biological effects of IL-7 are mediated through binding to the IL-7 receptor (IL-7R) complex. The high affinity receptor complex for IL-7 is composed of the ligand binding IL-7 receptor-alpha (IL-7 R alpha; IL-7Ra) chain and a common gamma chain shared by cytokine receptors for IL-2, IL-4, IL-9 and IL-15.</p> <p>IL-7Ra is expressed on bone marrow lymphoid precursors, pro-B cells, monocytes/macrophages, natural killer (NK) cells, naïve T cells and memory CD4+ and CD8+ T cells. IL-7Ra is also expressed on non-immune somatic cells such as intestinal colorectal and renal carcinoma cell lines and keratinocytes.</p> <p>IL-7Ra is a 439 amino acid membrane glycoprotein and contains 7 potential N-linked and 2 C-linked glycosylation sites.</p> <p>For a recent review of the role of IL-7 please refer to Fry TJ <i>et al.</i>, (2005) <i>J Immunol.</i> <b>174</b>(11): 6571-6.</p>

# human cell expressed IL-7 R alpha- Fc<sup>HCX</sup> Chimera



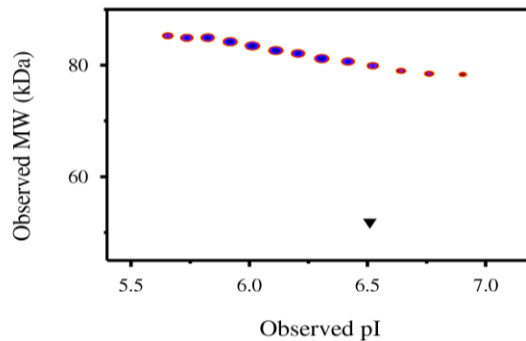
## 1D gel data

Lane 1 – MW markers; Lane 2 – IL-7 R alpha-Fc<sup>HCX</sup> Chimera; Lane 3 – IL-7 R alpha-Fc<sup>HCX</sup> Chimera treated with PNGase F to remove potential N-linked glycans. 10 µg protein loaded per lane; Deep Purple™ stained.

Drop in MW after treatment with PNGase F indicates presence of N-linked glycans. Band in lane 3 at 35 kDa is PNGase F protein.

## Densitometry

Post-translational modifications result in protein heterogeneity. The densitometry scan demonstrates the purified human cell expressed protein exists in multiple isoforms, which differ according to their level of post-translational modification.



Expression of these isoforms is highly significant for cell biology, as they more closely resemble the native human proteins.

The triangle indicates theoretical pI and MW of the protein. The original 2D gel from which the densitometry scan was derived is available upon request.

## Theoretical Sequence

```
ESG YA QNGDLEDAELDDYFSCYSQLEVNGSQHSLTCAFEDPDVNITNLEFEICGALVEVKCL  
NFRKLQEIYFIETKKFLLIGKSNICVKVGEKSLTCKKIDLTIVKPEAPFDLSVVYREGANDFVVT  
FNTSHLQKKYVKVLMHDVAYRQEKDENKWTHVNLSSTKLTLQRKLQPAAMY EIKVRSIPDHY  
FKGFWSEWSPSYFFRTPEINNSSGGIPKVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFP  
PKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVL  
TVLHQDWLNGKEYKCRVSNKALPAPIEKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLV  
KGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFCSSVMHE  
ALHNHYTQKSLSLSPGK
```