

## PRODUCT DATA SHEET



Bioworld Technology, Inc.

### Recombinant Murine Interleukin-2 (rMuIL-2)

Catalog Number: PR2022

Source: Escherichia coli.

Quantity: 5µg/20µg/1.0mg

#### Description

Mature mouse IL-2 shares 56% and 73% aa sequence identity with human and rat IL-2, respectively. It shows strain-specific heterogeneity in an N-terminal region that contains a poly-glutamine stretch. Mouse and human IL-2 exhibit cross-species activity. The receptor for IL-2 consists of three subunits that are present on the cell surface in varying pre-formed complexes. The 55 kDa IL-2 R $\alpha$  is specific for IL-2 and binds with low affinity. The 75 kDa IL-2 R $\beta$ , which is also a component of the IL-15 receptor, binds IL-2 with intermediate affinity. The 64 kDa common gamma chain $\gamma$ /IL-2 R $\gamma$ , which is shared with the receptors for IL-4, -7, -9, -15, and -21, does not independently interact with IL-2. Upon ligand binding, signal transduction is performed by both IL-2 R $\beta$  and  $\gamma$ . It drives resting T cells to proliferate and induces IL-2 and IL-2 R $\alpha$  synthesis. It contributes to T cell homeostasis by promoting the Fas-induced death of naïve CD4<sup>+</sup> T cells but not activated CD4<sup>+</sup> memory lymphocytes. IL-2 plays a central role in the expansion and maintenance of regulatory T cells, although it inhibits the development of Th17 polarized cells.

#### Molecular Weight:

Approximately 17.2 kDa, a single non-glycosylated polypeptide chain containing 149 amino acids.

#### Purity:

>95% by SDS-PAGE and HPLC analyses.

#### Biological Activity:

The ED<sub>50</sub> as determined by the dose dependent stimulation of murine CTLL-2 cells is < 0.2 ng/ml, corresponding to a specific activity of > 5 x 10<sup>6</sup> units/mg.

#### Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

#### Formulation:

Lyophilized from a 0.2mm filtered solution in PBS, pH 7.4.

#### AA Sequence:

P T S S S T S S S T A E A Q Q Q Q Q Q Q Q Q Q Q H L  
E Q L L M D L Q E L L S R M E N Y R N L K L P R M L  
T F K F Y L P K Q A T E L K D L Q C L E D E L G P L R  
H V L D L T Q S K S F Q L E D A E N F I S N I R V T V V  
K L K G S D N T F E C Q F D D E S A T V V D F L R R W  
I A F C Q S I I S T S P Q

#### Endotoxin:

Less than 1EU/mg of rmIL-2 as determined by LAL method.

#### Reconstitution:

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at <-20°C. Further dilutions should be made in appropriate buffered solutions.

#### Storage:

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

#### Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. Made in China

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