Technical Data Sheet

Recombinant Mouse IL-2

Product Information

Material Number:	**550069**
Size:	20 µg
Concentration:	200 µg/ml
Storage Buffer:	Frozen aqueous buffered solution containing BSA.

Description

Interleukin-2 (IL-2) is a cytokine which was first described and characterized based upon its potent ability to modulate lymphocyte reactivity and promote long term *in vitro* culture of antigen-specific effector T lymphocytes. It is responsible for the activities previously ascribed to T cell growth factor, thymocyte stimulating factor, helper-factor and T cell replacing factor, to name a few. IL-2 has also been reported to act on neuronal cells. Mouse IL-2 is a 17.2 kD protein containing 149 amino acid residues.

Formulation and Purity

Recombinant mouse IL-2 is supplied as a frozen liquid comprised of 0.22 µm sterile-filtered aqueous buffered solution containing 2.0 mg/ml biotechnology grade, low endotoxin bovine serum albumin, with no preservatives. Recombinant mouse IL-2 is > 95% pure, as determined by SDS-PAGE and an absorbance assay based on the Beers-Lambert law. The endotoxin level is ≤0.1 ng per µg of mouse IL-2, as measured in a chromogenic LAL assay.

Preparation and Storage

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Store product at -80°C prior to use or for long term storage of stock solutions. Rapidly thaw and quick-spin product prior to use. Avoid multiple freeze-thaws of product. Upon initial thawing, the product should be aliquoted into polypropylene microtubes and frozen at -80°C for future use. Alternatively, the product can be diluted in sterile neutral buffer containing not less than 0.5 – 10 mg/ml carrier protein such as human or bovine serum albumin, aliquoted and stored at -80°C. For in vitro biological assay use, we recommend carrier-protein concentrations of 1 mg/ml. For use as an ELISA standard we recommend carrier-protein concentrations of 5 –10mg/ml. NOTE: Failure to add carrier protein or store at indicated temperatures may result in a loss of activity. The product should not be diluted to less than 10 µg/ml for long term storage. Carrier proteins should be pre-screened for possible effects in an appropriate experimental system. Carrier proteins may effect experimental results due to toxicity, high endotoxin levels or possible blocking activity.

Application Notes

Application

Bioassay	Routinely Tested
ELISA Standard	Routinely Tested
Blocking	Tested During Development

Recommended Assay Procedure:

Biological Activity: Activity Range is measured in a proliferation assay using CTLL-2 indicator cells

Specific Activity: 0.1 - 1.0 x 10^9 Units*/mg

ED50: 10 - 100 pg/ml

Observed dose response relationship: 80 fold.

*Unit is defined as the amount of material required to stimulate a half-maximal response at cytokine saturation.

ELISA Standard: Recombinant mouse IL-2 is useful as a quantitative standard for measuring mouse IL-2 protein levels in an IL-2 specific sandwich ELISA with the purified JES6-1A12 antibody (Cat. No. 554424) as a capture antibody and the biotinylated JES6-5H4 antibody (Cat. No. 554426) as the detection antibody. To obtain linear standard curves, doubling dilutions of this mouse IL-2 standard from ~2,000 to 15 pg/ml should be included in each ELISA plate. For specific methodology, please visit the protocols section or chapter on ELISA in the Immune Function Handbook, both of which are posted on our web site, www.bdbiosciences.com. *Note: This ELISA pair is recommended primarily for measuring cytokine from experimental cell culture systems. These ELISA reagents are not recommended for assaying serum or plasma samples. For measuring mouse IL-2 in serum or plasma the mouse IL-2 BD OptEIA™ Set (Cat. No. 555148) is specially formulated and recommended.*

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Ligand Blocking Control for Immunofluorescent Staining of Cytokines: Recombinant mouse IL-2 protein can be used as a blocking control to demonstrate the specificity of IL-2 staining by the Alexa Fluor ® 488, FITC-, PE-, or APC-labeled JES-5H4 antibodies (Cat. No. 557725, No. 554427, No. 554428, and No. 554429). For specific methodology, please visit the protocols section or chapter on intracellular staining in the Immune Function Handbook, both of which are posted on our web site, www.bdbiosciences.com. This application is not routinely tested at BD.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554424	Purified Rat Anti-Mouse IL-2	0.5 mg	JES6-1A12
554426	Biotin Rat Anti-Mouse IL-2	0.5 mg	JES6-5H4
555148	Mouse IL-2 ELISA Set	20 plates	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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