

**Datasheet for 010-001-V61-0002****rMouse IL-21 Protein****Overview**

|                      |                                                             |
|----------------------|-------------------------------------------------------------|
| <b>Description:</b>  | Mouse Interleukin-21 Recombinant Protein - 010-001-V61-0002 |
| <b>Item No.:</b>     | 010-001-V61-0002                                            |
| <b>Size:</b>         | 2 µg                                                        |
| <b>Applications:</b> | Cellular Assay                                              |
| <b>Origin:</b>       | Mouse                                                       |
| <b>Expressed in:</b> | E. coli                                                     |

**Product Details**

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Background:</b>        | Interleukin-21 (IL-21) is a member of the common gamma-chain family of cytokines (includes IL-2, IL-4, IL-7, IL-9, IL-13, and IL-15) and is expressed by activated CD4+ T cells. IL-21 has a private receptor known as IL-21R, which is expressed on T, B, and NK cells. Within the B cell lineage, IL-21 regulates IgG1 production and cooperates with IL-4 for the production of multiple Ab classes in vivo. Initial studies have demonstrated that IL-21 has pleiotropic effects on the proliferation, differentiation, and effector functions of B, T, natural killer, and dendritic cells. Recombinant mouse IL-21 is a non-glycosylated protein, containing 130 amino acids, with a total molecular weight of 15.1 kDa. |
| <b>Synonyms:</b>          | Interleukin-21, IL-21, Za11, Interleukin 21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species of Origin:</b> | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Expressed in:</b>      | E. coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Type:</b>              | Recombinant Protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Low Endotoxin:</b>     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**Target Details**

|                            |                                                                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name:</b>          | IL21                                                                                                                                                         |
| <b>Purity/Specificity:</b> | Interleukin-21 purity was determined to be greater than 95% as determined by analysis by UV-Spectroscopy at 280nm and by reducing and non-reducing SDS-PAGE. |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"><li>• <a href="#">UniProtKB - Q9ES17</a></li></ul>                                                                         |

## Application Details

|                                |                                                                                                                                                                                                                                                                     |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suggested Applications:</b> | Cellular Assay (Based on references)                                                                                                                                                                                                                                |
| <b>Application Note:</b>       | Interleukin-21 Recombinant Protein has been tested by biological activity and is suitable as a control for polyclonal or monoclonal anti-Interleukin-21 in immunological assays. Lyophilized in 20 mM sodium bicarbonate, pH 8.5.                                   |
| <b>Assay Dilutions:</b>        | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                                                     |
| <b>Other:</b>                  | Endotoxin Level: Measured by kinetic LAL analysis and is typically $\leq 1$ EU/ $\mu$ g protein. Biologic Activity: The activity is determined by a dose-dependent proliferation of lymphocytes co-stimulated with anti-CD3 $\epsilon$ and is typically 2-50 ng/mL. |

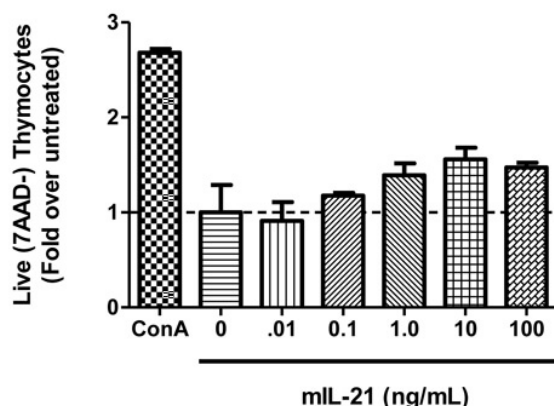
## Formulation

|                               |                                              |
|-------------------------------|----------------------------------------------|
| <b>Physical State:</b>        | Lyophilized                                  |
| <b>Buffer:</b>                | See application note.                        |
| <b>Preservative:</b>          | None                                         |
| <b>Stabilizer:</b>            | None                                         |
| <b>Reconstitution Volume:</b> | 2 $\mu$ l (2-20 $\mu$ l)                     |
| <b>Reconstitution Buffer:</b> | Restore with deionized water (or equivalent) |

## Shipping & Handling

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Shipping Condition:</b> | Ambient                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Storage Condition:</b>  | Store vial at 4° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL). For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature. |
| <b>Expiration:</b>         | Expiration date is six (6) months from date of receipt.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Images



#### SDS-PAGE

Bioactivity of Mouse Interleukin-21 Recombinant Protein. Serial dilutions of Mouse IL-21 (starting at 100 ng/mL) or ConA (+ control) were added to primary mouse thymocytes cultured on an anti-cD3e coated plate. After 72 hours, total live thymocytes were measured and the linear portion of the curve was used to calculate the ED50. The ED50 of Mouse IL-21 is between 2.5-7.5 ng/mL. This effect is comparable to the competitor sample assayed in J. Parrish-Novak, et al. (2000) Nature 408:57-63.

## Disclaimer

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