

CD28 Protein, Rat, Recombinant (His)

General Information

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| Synonyms: | CD28 molecule |
| Protein Construction: | Asn20-Leu150 |
| Species: | Rat |
| Expression Host: | HEK293 Cells |
| Accession: | P31042 |
| Molecular Weight: | 16.66 kDa (Predicted); 40-55 kDa (Reducing conditions due to glycosylation) |

QC Testing

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| Biological Activity: | Human B7-1, hFc Tag captured on CM5 Chip via Protein A can bind Rat CD28, His Tag with an affinity constant of 42.64 μ M as determined in SPR assay (Biacore T200). |
| Purity: | > 95% as determined by Bis-Tris PAGE |
| Endotoxin: | < 1.0 EU/ μ g of the protein as determined by the LAL method. |
| Formulation: | Lyophilized from 0.22 μ m filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization. |

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

CD28 is the receptor for CD80 (B7-1) and CD86 (B7-2) proteins. When activated by Toll-like receptor ligands, the CD80 expression is upregulated in antigen presenting cells (APCs). The CD86 expression on antigen presenting cells is constitutive. CD28 is the only B7 receptor constitutively expressed on naive T cells.

Reference

Keir ME,et al.(2005) The B7/CD28 costimulatory family in autoimmunity. Immunol Rev. 204: 128-43.

Sansom DM,et al.(2006) The role of CD28 and cytotoxic T-lymphocyte antigen-4 (CTLA-4) in regulatory T-cell biology. Immunol Rev. 212: 131-48.

Bjrgo E,et al.(2010) Novel mechanism of signaling by CD28. Immunol Lett. 129(1): 1-6.

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