Data Sheet (Cat.No.TMPY-05769)

CRLF2/TSLPR Protein, Human, Recombinant (hFc)

General Information

Synonyms: CRLF2Y;cytokine receptor-like factor 2;CRL2;TSLPR

Protein Construction: A DNA sequence encoding the human CRLF2 (NP_071431.2) (Met1-Lys231) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Gln23

Species: Human

Expression Host: HEK293 Cells

Accession: D0E2W4

Molecular Weight: 50.91 kDa (predicted)

QC Testing

Biological Activity: 1.Recombinant Human CRLF2/TSLPR Protein, hFc Tag (Cat#TMPY-05769) captured on Protein A chip can bind Recombinant Human TSLP Protein (R127A, R130S), His Tag (Cat#TMPY-05220) with an affinity constant of 1.43 nM as determined in an SPR assay (Biacore 8K)(Routinely tested).
2.Loaded Recombinant Human CRLF2/TSLPR Protein (hFc Tag)(Cat#TMPY-05769) on proA Biosensor, can bind Recombinant Cynomolgus TSLP Protein (His Tag)(Cat#TMPY-05453) with an affinity constant of 2.250 nM as determined in BLI assay (Sartorius Octet RED384)(Routinely tested).
3.Immobilized Recombinant Human CRLF2 Protein (Fc Tag) (Cat#TMPY-05769) at 5 μg/mL(100 μL/well) can bind Recombinant Human TSLP Protein (R127A, R130S, His Tag), Biotinylated (Cat#TMPY-05756), the EC50 is 2.5-7.5 ng/mL(QC tested).
4.Recombinant Human TSLP Protein (R127A, R130S, His Tag)(Cat#TMPY-05756) captured on CM5 chip via Anti-His antibody, can bind Recombinant Human CRLF2 Protein (Fc Tag)(Cat#TMPY-05769) with an affinity constant of 0.511 nM as determined in an SPR assay (Biacore 8K)(Routinely tested).

Purity: > 95 % as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

Overexpression of cytokine receptor-like factor 2 (CRLF2) due to chromosomal rearrangement has been observed in acute lymphoblastic leukemia (ALL) and reported to contribute to oncogenesis and unfavorable outcome in ALL. The high CRLF2 expression works with the IKZF1 deletion to drive oncogenesis of ALL and has significance in an integrated prognostic model for adult high-risk ALL. Thymic stromal lymphopoietin (TSLP) stimulates in-vitro proliferation of human fetal B-cell precursors. However, its in-vivo role during normal human B lymphopoiesis is unknown. Genetic alterations that cause overexpression of its receptor component, cytokine receptor-like factor 2 (CRLF2), lead to high-risk B-cell acute lymphoblastic leukemia implicating this signaling pathway in leukemogenesis. CRLF2 over-expression is a poor prognostic marker identifying a subset of HR T-ALL patients that could benefit from alternative therapy, potentially targeting the CRLF2 pathway. Cytokine receptor-like factor 2 (CRLF2) rearrangement is found in approximately 50% of pediatric Ph-like B-cell acute lymphoblastic leukemia (B-ALL), and around 50% of CRLF2 + cases harbor JAK mutations. Cytokine receptor-like factor 2(CRLF2) plays an important role in the development of normal B lymphocytes, which can mediate early B cell proliferation and survival.

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