Data Sheet (Cat.No.TMPY-06898)

TargetMol

SIGIRR Protein, Human, Recombinant (His), Biotinylated

General Information

Synonyms:	single immunoglobulin and toll-interleukin 1 receptor (TIR) domain;TIR8
Protein Construction:	A DNA sequence encoding the Human SIGIRR (Q6IA17-1) (Met1-His118) was expressed, fused with a polyhistidine tag at the C-terminus. The purified protein was biotinylated in vitro. Predicted N terminal: Met 1
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q6IA17-1
Molecular Weight:	13.98 kDa (predicted); 28.45 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
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

Single Ig IL-1-related receptor (SIGIRR) or TIR8 is a member of Toll-like receptor-interleukin 1 receptor signaling (TLR-IL-1R) receptor superfamily. Although SIGIRR/TIR8 shows the typical conserved motifs that characterize the IL-1R and Toll superfamily, it is structurally and functionally distinct from both. SIGIRR/TIR8 has only one Ig domain in its extracellular portion whereas the IL-1R family contains three Ig folds. An unusually long cytoplasmic domain

is reminiscent of the structure of drosophila Toll, yet the SIGIRR peptide sequence is more closely related to IL-1RI. SIGIRR/TIR8 was mainly expressed in mouse and human epithelial tissues such as kidney, lung and gut. Resting and activated T and B lymphocytes and monocytes-macrophages expressed little or no SIGIRR/TIR8, with the exception of the mouse GG2EE macrophage line. Inflammation is enhanced in SIGIRR-deficient mice. SIGIRR negatively modulates immune responses. Inflammation is enhanced in SIGIRR-deficient mice, as shown by their enhanced chemokine induction after IL-1 injection and reduced threshold for lethal endotoxin challenge.

Reference

Wald D,et al. (2003) SIGIRR, a negative regulator of Toll-like receptor-interleukin 1 receptor signaling. Nat Immunol. 4(9): 920-7.

Polentarutti N,et al. (2003) Unique pattern of expression and inhibition of IL-1 signaling by the IL-1 receptor family member TIR8/SIGIRR. Eur Cytokine Netw. 14(4): 211-8.

Wald D,et al. (2003) SIGIRR, a negative regulator of Toll-like receptor-interleukin 1 receptor signaling. Nat Immunol. 4(9): 920-7.

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