Recombinant Human SECTM1 Fc Chimera
Catalog Number: 7559-ST

DESCRIPTION

Source
Chinese Hamster Ovary cell line, CHO-derived

<table>
<thead>
<tr>
<th>Human SECTM1 (Gln29-Gly145) Accession # Q8WVN6</th>
<th>IEGRMD</th>
<th>Human IgG1 (Pro100-Lys330)</th>
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</thead>
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N-terminal Sequence Analysis
Gln29 predicted: No results obtained, sequencing might be blocked

Structure / Form
Disulfide-linked homodimer

Predicted Molecular Mass
39.3 kDa (monomer)

SPECIFICATIONS

SDS-PAGE
50-60 kDa, reducing conditions

Activity
Measured by its ability of the immobilized protein to support the adhesion of Jurkat human acute T cell leukemia cells. When 5 x 10⁴ cells per well are added to Recombinant Human SECTM1 Fc Chimera coated plates, cell adhesion is enhanced in a dose dependent manner. The ED₅₀ for this effect is 1.5-7.5 μg/mL.

Optimal dilutions should be determined by each laboratory for each application.

Endotoxin Level
<0.10 EU per 1 μg of the protein by the LAL method.

Purity
>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation
Lyophilized from a 0.2 μm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution
Reconstitute at 100 μg/mL in PBS.

Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

BACKGROUND

SECTM1 (secreted and transmembrane 1), also called K12, is either found as an approximately 27 kDa intracellular type I transmembrane protein that shows a perinuclear, Golgi-like staining pattern, or as a 20 kDa soluble, secreted form (1, 2). SECTM1 protein expression is detected in some myeloid cells, such as stimulated monocytes, immature monocyte-derived dendritic cells, and granulocytes (1-3). In the thymus, it is also expressed by epithelia and fibroblasts (2). Stimulation with IFN-γ is often necessary to detect SECTM1 expression, and it is thought to be an interferon early-response gene (1-5). Human SECTM1 cDNA encodes 248 amino acids (aa), including a 28 aa signal sequence, a 117 aa extracellular domain (ECD) with one potential N-linked glycosylation site, a 21 aa transmembrane sequence, and an 82 aa cytoplasmic sequence (1). The ECD shows some similarity to Ig domains (1). The human SECTM1 ECD shares limited (approximately 45-51%) aa sequence identity with mouse SECTM1 (a or b) and rat SECTM1 ECD. SECTM1 from human and mouse each show species-specific binding of CD7 and co-stimulate CD4⁺ and CD8⁺ T cells through CD7, either alone or through synergy with CD28 (2-4). Immobilized recombinant human SECTM1/Fc also enhances human NK cell expression of activation markers such as CD25, CD69 and CD54 (4).

References: