Human Recombinant CD27 Stable Cell Line

Cat. No. M00610 **Version 04282015**

I. INTRODUCTION

Catalog Number: M00610
Cell Line Name: GS-H2/CD27
Gene Synonyms: S152, S152. LPFS2, T14, TNFRSF7
Expressed Gene: Codon Optimized from NM_001242.4
Host Cell: GS-H2
Quantity: Two vials of frozen cells (1×10^6 per vial)
Stability: 20 passages
Application: *in vitro* functional assay
Freeze Medium: 95% complete growth medium, 5% DMSO
Complete Growth Medium: MEM, 10% FBS
Culture Medium: MEM, 10% FBS, 2 μg/ml Puromycin, 200 μg/ml Hygromycin B
Mycoplasma160: Negative
Functional Performance: Using CD70 (the ligand of CD27), Signal / Background (S/B) > 3
Storage: Liquid nitrogen immediately upon receipt

II. BACKGROUND

CD27 is a member of the tumor necrosis factor receptor superfamily. It is currently of interest to immunologists as a co-stimulatory immune checkpoint molecule. It binds to ligand CD70, and plays a key role in regulating B-cell activation and immunoglobulin synthesis. This receptor transduces signals that lead to the activation of NF-κB and MAPK8/JNK. Varlilumab is an antibody that binds to CD27 and is an experimental cancer treatment.

REPRESENTATIVE DATA

- Protein Expression Validation

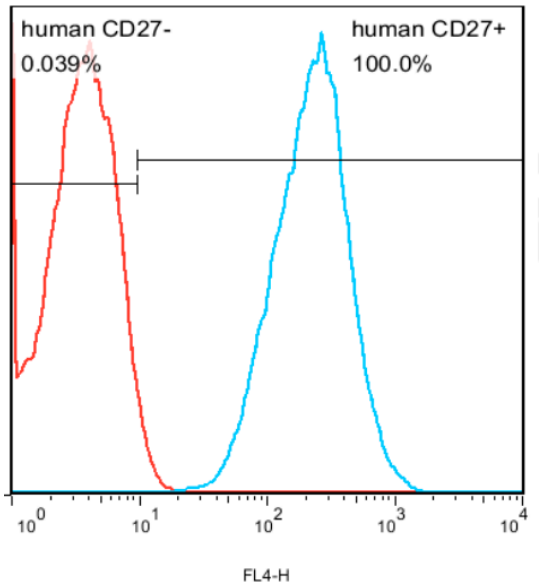

Figure 1. Flow cytometry analysis of CD27 protein expression in GS-H2/CD27 cells. Red: GS-H2, Blue: GS-H2/CD27.

- Functional Validation by *in vitro* Assay

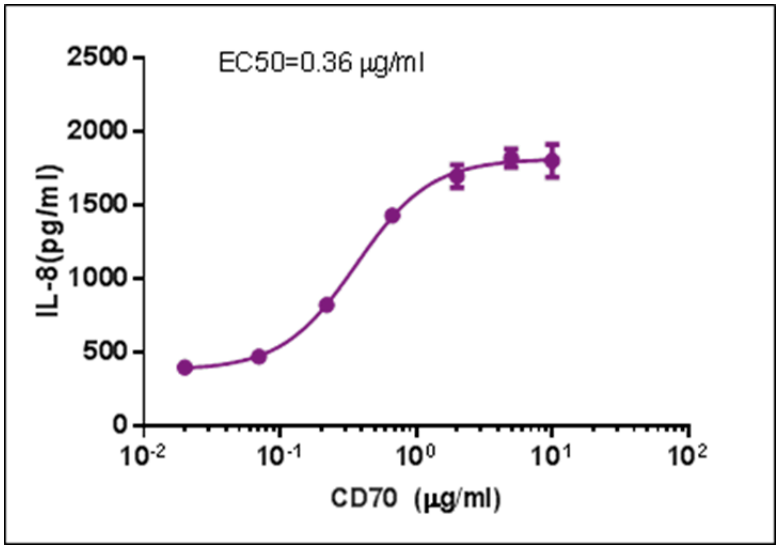

Figure 2. Functional evaluation of GS-H2/CD27 cells by measuring CD70 induced IL-8 production.

III. THAWING AND SUBCULTURING

Thawing Protocol

1. Remove the vial from liquid nitrogen tank and thaw cells quickly in a 37°C water-bath.
2. Just before the cells are completely thawed, decontaminate the outside of the vial with 70% ethanol and transfer the cells to a 15 ml centrifuge tube containing 9 ml of complete growth medium.
3. Pellet cells by centrifugation at 200 x g for 5 min, and remove the medium.
4. Resuspend the cells in complete growth medium.
5. Transfer the cell suspension to a 10 cm dish with 10 ml of complete growth medium.
6. Grow the cells in incubator with 37°C, 5 % CO_2.
7. Add antibiotic in the following day.

Sub-culturing Protocol

1. Centrifuge the cells at 200 x g for 5min, and remove the medium.
2. Resuspend the cells in culture medium and add the cells suspension to new culture dish.
3. Grow the cells in incubator with 37°C, 5 % CO_2.

Subcultivation Ratio: A subcultivation ratio of 1:4 to 1:8 is recommended

Medium Renewal: Every 2 to 3 days

IV. REFERENCES

1. Prasad KV, Ao Z, Yoon Y, Wu MX, Rizk M, Jacquot S, Schlossman SF (Jun 1997). "CD27, a member of the tumor necrosis factor receptor family, induces apoptosis and binds to Siva, a proapoptotic protein". Proceedings of the National Academy of Sciences of the United States of America. 94 (12): 6346–51.
2. Yamamoto H, Kishimoto T, Minamoto S (Nov 1998). "NF-kappaB activation in CD27 signaling: involvement of TNF receptor-associated factors in its signaling and identification of functional region of CD27". Journal of Immunology. 161 (9): 4753–9.
3. Akiba H, Nakano H, Nishinaka S, Shindo M, Kobata T, Atsuta M, Morimoto C, Ware CF, Malinin NL, Wallach D, Yagita H, Okumura K (May 1998). "CD27, a member of the tumor necrosis factor receptor superfamily, activates NF-kappaB and stress-activated protein kinase/c-Jun N-terminal kinase via TRAF2, TRAF5, and NF-kappaB-inducing kinase". The Journal of Biological Chemistry. 273 (21): 13353–8.

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