

DESCRIPTION

Cell Line Name	Human CD47-CHO-K1 stable cell line
Gene Sequence	Full-length human CD47 (NP_001768.1)
Host Cell	CHO-K1 (Adherent cells)
Quantity	Two vials of frozen cells (~1x10 ⁶ per vial)
Culture Medium	DMEM with 10% FBS and 4 µg/mL puromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

BACKGROUND

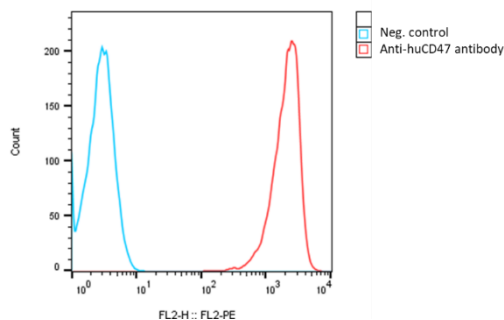
CD47 is a transmembrane protein that belongs to the immunoglobulin (Ig) superfamily and regulates phagocytosis by macrophages. Binding of CD47 to its counter-receptor, SIRP α , on macrophages leads to inhibition of phagocytosis. CD47 is widely expressed in normal tissues but is highly expressed on cell surface of many types of cancer, including human acute myeloid leukemia (AML) and small-cell lung cancer (SCLC). CD47 serves as a don't-eat-me signal and its overexpression is a mechanism for cancer cells to evade immune surveillance. Blocking the interaction of CD47 with SIRP α by anti-CD47 blocking antibody leads to increased phagocytosis and tumor growth inhibition.

THAWING AND CULTURING

- Remove the cell vial from liquid nitrogen tank and thaw cells quickly in a 37°C water bath
- Transfer cells to a 15 ml conical tube containing 4 ml of culture medium
- Centrifuge the tube at 200x g for 5 min and discard the supernatant
- Resuspend the cell pellet with 7 ml of culture medium and transfer the cells to a 25 ml cell culture flask
- Incubate the T25 flask in a CO₂ incubator with 5% CO₂ at 37°C.
- Split cells twice a week or as needed.

DATA

Detection of human CD47 expression on CHO-K1 cells using a recombinant human anti-CD47 monoclonal antibody (Cat. #A1011) specific for human CD47, followed by staining with a PE-anti-human IgG antibody.



REFERENCES

- McCracken MN, Cha AC, Weissman IL. Molecular pathways: activating T cells after cancer cell phagocytosis from blockade of CD47 “don't eat me” signals. *Clin Cancer Res.* 21:3597-601. 2015.
- Liu, J. et al., Pre-clinical development of a humanized anti-CD47 antibody with anti-cancer therapeutic potential. *PLOS ONE* 10(9):e0137345, 2015.

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