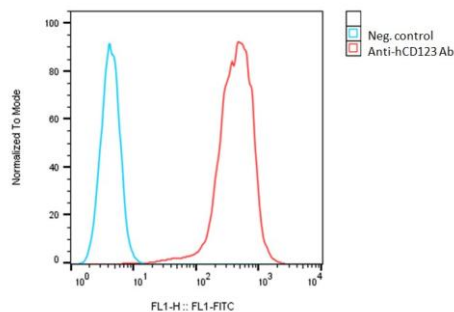


SPECIFICATIONS

Catalog Number	C3086
Cell Line Name	Human CD123-CHO-K1 stable cell line
Accession Number	NM_002183.4
Host Cell	Adherent CHO-K1
Quantity	Two vials of frozen cells (2x10 ⁶ per vial)
Culture Medium	DMEM with 10% FBS, 4µg/ml puromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

DATA

Detection of human CD123 expression on human CD123-CHO-K1 stable cells using a monoclonal antibody specific for human CD123 (SinoBiological, Cat #10518-MM57-F)


BACKGROUND

CD123 is the alpha chain of the interleukin-3 receptor (IL-3R α), a cell surface protein that plays a critical role in the signaling pathway of interleukin-3 (IL-3), a cytokine involved in the proliferation, differentiation, and survival of hematopoietic cells. CD123, together with the common beta chain (or CD131), forms the high-affinity receptor complex for IL-3. This receptor is a member of the cytokine receptor family, and its activation triggers multiple intracellular signaling cascades, including the JAK/STAT, PI3K/AKT, and MAPK pathways, leading to various cellular outcomes such as cell growth, survival, and differentiation. These pathways influence cellular activities such as proliferation, differentiation, and apoptosis, particularly within the myeloid lineage of blood cells. CD123 is expressed at low to moderate levels on various hematopoietic cells, particularly on plasmacytoid dendritic cells (pDCs), basophils, and eosinophils. In healthy individuals, CD123 expression is generally low in most tissues, apart from specific immune cell subsets. CD123 is overexpressed in several hematologic malignancies, including Acute Myeloid Leukemia (AML) where it's highly expressed on leukemic stem cells, distinguishing them from normal hematopoietic stem cells (HSCs). Given its restricted expression on normal cells and overexpression on malignant cells, CD123 has emerged as a promising therapeutic target, especially in hematologic cancers.

References

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Testa U, Pelosi E, Frankel A. CD 123 is a membrane biomarker and a therapeutic target in hematologic malignancies. *Biomark Res.* **2(1)**:4. 2014.

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