



NIH AIDS Reagent Program

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DATA SHEET

Reagent:	THP-1 NCI DC-SIGN+ Cells
Catalog Number:	9950
Lot Number:	170244
Release Category:	C
Provided:	1 mL of cells Post thaw cell count = 5.80×10^6 cells/mL Post thaw cell viability = 54% Cell viability increased to 95% after 5 days in culture.
Cell Type:	Human monocytic cell line
Propagation Medium:	RPMI 1640, 90%; fetal bovine serum, 10%.
Freeze Medium:	RPMI 1640, 70%; fetal bovine serum, 20%; DMSO, 10%.
Growth Characteristics:	Doubling time of approximately 24 hours.
Morphology:	Monocytic, Suspension Cell Line
Sterility:	Negative for mycoplasma, bacteria and fungi
Description:	Human monocyte cell line transduced to express DC-SIGN.

ALL RECIPIENTS OF THIS MATERIAL MUST COMPLY WITH ALL APPLICABLE BIOLOGICAL, CHEMICAL, AND/OR RADIOCHEMICAL SAFETY STANDARDS INCLUDING SPECIAL PRACTICES, EQUIPMENT, FACILITIES, AND REGULATIONS. NOT FOR USE IN HUMANS.

Special Characteristics:	<p>This cell line is derived from parental THP-1 NCI cells (cat# 9949), a human leukemic cell line cultured from the blood of a pediatric patient with acute monocytic leukemia originally obtained from Dr. Howard Young at the National Cancer Institute (NCI). The THP-1 NCI parental line expresses low levels of endogenous DC-SIGN. These cells also express CD4 and can be infected by CXCR4-tropic HIV.</p> <p>THP-1 NCI DC-SIGN+ cells were generated by transduction of the parental cells with MX-DC-SIGN retroviral vectors followed by fluorescence-activated cell sorting (FACS) to obtain a high levels of DC-SIGN expression population. The MX-DC-SIGN vector encodes no drug-selectable marker gene.</p> <p>Variable expression of DC-SIGN will be observed in the cell population if kept more than one month in culture, early freezes of this line should be established. THP-1 NCI/DC-SIGN cells do not support DC-SIGN-mediated HIV transmission to bystander cells <i>in trans</i>.</p>
Recommended Storage:	Keep the reagent in liquid nitrogen.
Contributor:	Drs. Li Wu and Vineet N. KewalRamani, HIV Drug Resistance Program, NCI.
References:	<p>L. Wu, T. D. Martin, M. Carrington and V. N. KewalRamani. (2004). Raji B cells, misidentified as THP-1 cells, stimulate DC-SIGN-mediated HIV transmission. <i>Virology</i>, 318(1), 17-23. doi:10.1016/j.virol.2003.09.028 PUBMED</p> <p>S. Tsuchiya, M. Yamabe, Y. Yamaguchi, Y. Kobayashi, T. Konno and K. Tada. (1980). Establishment and characterization of a human acute monocytic leukemia cell line (THP-1). <i>Int J Cancer</i>, 26(2), 171-6. PUBMED</p>
NOTE:	<p>Acknowledgment for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH: THP-1 NCI DC-SIGN+ Cells from Drs. Li Wu and Vineet N. KewalRamani (cat# 9950)." Also include the reference cited above in any publications.</p> <p>Scientists at for-profit institutions or who intend commercial use of this reagent must contact the NCI Technology Transfer Center at the following email address: lauren.nguyen-antczak@nih.gov, before the reagent can be released.</p>
Last Updated	November 19, 2020

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