



Manual preparation and collection of specimens for Stem cells count (CD34 and/or CD105)

OBJECTIVE

This manual is intended to provide a guide for the user in the selection of test items, type specimens and delivery of the specimens correctly.


CONTACT INFORMATION

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TESTING	Stem cells count (CD34 and/or CD105)
OBJECTIVE	To detect the amount of stem cells in Peripheral blood <ul style="list-style-type: none"> • Hematopoietic stem cells (CD34) • Mesenchymal stem cells (CD105)
METHOD	Direct immunofluorescence by Flow cytometry
CONTAINER	Blood collection tube contains EDTA (Purple top) <div style="text-align: center;">  </div>
SPECIMEN	2 tubes of EDTA - whole blood , 3 ml / each tube
PATIENT PREPARATION	No fasting
COLLECTION AND TRANSPORTATION	<ol style="list-style-type: none"> 1. Draws blood from veins volume 6 mL and put into 2 blood collection tubes with EDTA, 3 mL per each tube 2. Convert tube gently for mixing blood and EDTA together 3. Keep blood after drawing at room temperature (20 - 25 degree Celsius) 4. Send to laboratory within 6 hours after drawing the blood (Note: In case with keeping blood over 6 hours, please keep this blood in 4 °C and send to laboratory within 24 hours after drawing the blood) 5. Complete all information of the request form 6. Call laboratory to process blood delivery. Please attach request form and sample for testing to officer
SPECIMEN REJECTION	<ul style="list-style-type: none"> • Unlabeled or Sample labeled with more than one name • Requisition and Sample Labeling mismatch • Incorrect container or preservative that would invalidate results • Specimens kept over 6 hours after blood draws that would affect the results • Sample not suitable for analysis e.g. clotting, gross hemolysis, gross lipidemia and frozen • Inappropriate patient preparation e.g. patient receiving drug immunosuppression within 1 month • Improper transportation e.g. keeping specimen on ice during transportation



SERVICE HOURS	Regular hours of operation <ul style="list-style-type: none">Monday to Saturday 09:00 am to 05:00 pmSunday and public holidays Closed
TURNAROUND TIME	3 working days
RECEIVE THE RESULTS	<ul style="list-style-type: none">Fax or E-mail as request in request formOriginal report form will be enclosed and send to patient by messenger
ANALYSIS UNITS	Report as percentage (%) and absolute count (cells/ μ L)
REFERENCE VALUE	<ul style="list-style-type: none">CD34 0.01 – 0.05 % of white blood cells
REFERENCES	<ul style="list-style-type: none">Product Description No. 8/00 23-3531-02, Becton DickinsonSutherland DR, Anderson L, Keeney M, Nayar R, Chin-Yee I., The ISHAGE Guidelines for CD34+ Cell Determination by Flow Cytometry., J Hematother. 1996 Jun;5(3):213-26.Barnett D1, Janossy G, Lubenko A, Matutes E, Newland A, Reilly JT., Guideline for the flow cytometric enumeration of CD34+ haematopoietic stem cells. Prepared by the CD34+ haematopoietic stem cell working party. General Haematology Task Force of the British Committee for Standards in Haematology., Clin Lab Haematol. 1999 Oct;21(5):301-8.



Example of Request form



Wincell Research Co., Ltd

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Tel: (+66)2-670-0731-2, Fax: (+66)2-670-0733, E-mail: Lab@wincellresearch.com

FM-WC-057

Laboratory Request Form

Patient information	Specimen information
Name : Win Research	Collection date : 15/06/15 Collection time : 13.00
Age : 35 Sex : Female HN : 15015	Collection by : Alis Natcha
Hospital/Clinic : Win Clinic	Specimen types
Ordering Physician : Dr. Wincell Empire	<input checked="" type="checkbox"/> EDTA – blood <input type="checkbox"/> Heparinized - blood
Diagnosis : _____	<input type="checkbox"/> EDTA – plasma <input type="checkbox"/> Heparinized - plasma
	<input type="checkbox"/> Serum
	<input type="checkbox"/> Other : _____

Laboratory Testing

Special test	Flow cytometry*	Cell culture**
<input type="checkbox"/> Natural cytotoxic activity (NK activity)	<input checked="" type="checkbox"/> Stem cell count (CD34 / CD105)	<input type="checkbox"/> Win-K cells (NK / CIK culture)
<input type="checkbox"/> Telomere length	<input type="checkbox"/> Hematopoietic stem cell count (CD34)	<input type="checkbox"/> DC cancer vaccine
<input type="checkbox"/> HMW Adiponectin	<input type="checkbox"/> Mesenchymal stem cell count (CD105)	Other
<input type="checkbox"/> VEGF-A***	<input type="checkbox"/> NK cell count (CD3 / CD16+56 / CD45)	
<input type="checkbox"/> Other : _____		

Remark:

- * Required HIV, HBsAg and HCV Profiles
- ** Required Complete Blood Count (CBC) Profile
- *** Research use only

Customer information	For Wincell Research laboratory use only		
Request date : 15/06/15	List	Correct	Incorrect
Request time : 13.30	<ul style="list-style-type: none"> • Completed request form • Specimen types • Specimen is in good condition 	[]	[]
Report pick-up :		[]	[]
<input type="checkbox"/> Tel _____		[]	[]
<input checked="" type="checkbox"/> E-mail Lab@example.com	Decision : <input type="checkbox"/> Accept <input type="checkbox"/> Reject		
<input type="checkbox"/> Fax _____	Comment : _____		
<input type="checkbox"/> By self	_____		
Send by : Alis Natcha	Signature : _____		
(_____)	(_____)		
Date : 15/06/15	Date : _____		
Time : 13.30	Time : _____		

Example of stem cell count report



Wincell Research Co., Ltd
1, 29th Floor Empire Tower
Sathorn rd, Yannawa, Sathorn, Bangkok 10120
Tel: 02-670-0731-2 Fax: 02-670-0733
Email: info@wincellresearch.com

Name: Win Research
Hospital/Clinic: Win Clinic
Request by: Dr.Wincell Empire
Request date: 15 June 2015
Received date: 15 June 2015
Report date: 17 June 2015
Wincell HN: 15-1909

Age: 35 **Sex:** F
HN: 15015
Request time: 13.30
Received time: 14.30
Report time: 14.10
Wincell LN: WSC15199

Laboratory Report						
Tests	Results	Unit	Flag	Reference range	Specimen	Method
Stem cell markers <ul style="list-style-type: none"> CD 34 enumeration (CD 34+/CD45+) 	= 0.03% x 5,800* = 1,500 = 1,500	cells/ μ L cells/ μ L cells/mL	N	CD34: 0.01-0.05 % of WBC	EDTA-Blood	Flow cytometry
<ul style="list-style-type: none"> CD 105 enumeration (CD34-/CD45-/CD105+) 	< 0.01% **	cells/mL	-	-		
Comment: * Total white blood cells (cells/ μ L) ** Sample measured below the lowest machine performance is considered to be lower than 0.01% of total nucleated cell						

*** End of Report ***

Reported by :

(Alisa L., M.Sc.)

Approved by :

(Suphakit K., Ph.D.)
(MT.5947)

ห้องปฏิบัติการรับรองผลการทดสอบเฉพาะรายงานฉบับจริงหรือสำเนารายงานที่มีข้อมูลครบถ้วนทั้งฉบับเท่านั้น