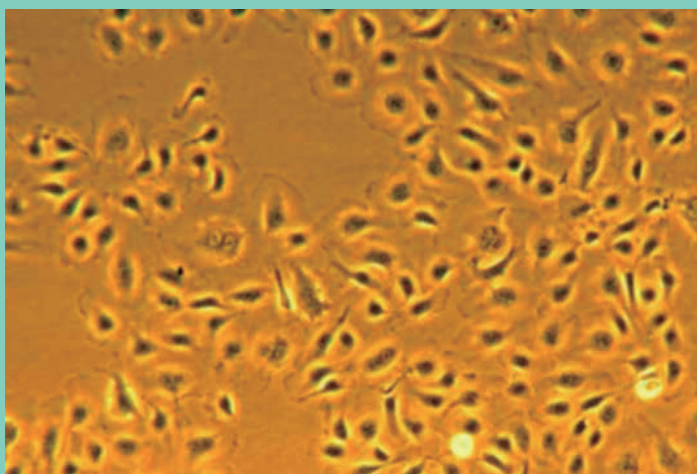


Lonza

HUVEC

Human Umbilical Vein Endothelial Cells

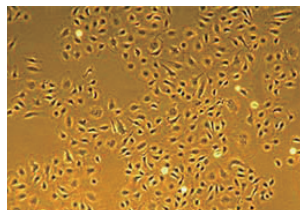


更多優惠 請洽當區業務

HUVEC (Human Umbilical Vein Endothelial Cells)

產品特色

- 細胞代數 : P1
- 可繼代 **15 population doublings**
(*except HUVEC-XL™ guaranteed through 5 PD)
- **Express CD31/105, von Willebrand Factor VIII, and are positive for acetylated low density lipoprotein uptake**
- 不需額外 **coating ECM**
- 提供多種 **HUVEC 種類選擇**
- 提供完整的 **Angiogenesis Protocol**



HUVEC isolated in EGM™-Plus Growth Medium

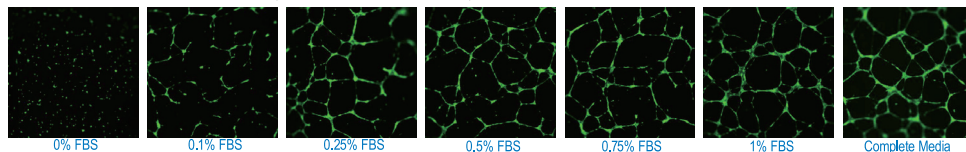
依據不同實驗需求，提供多種細胞選擇

Selection media	Cat No	Characteristics
Isolated in EGM™ Media (CC-3124)*	CC-2517 (single donor) CC-2519 (pooled donor)	Isolated in absence of defined growth factors contains BBE
Isolated in EGM™ -Plus Media (CC-5035)*	CC-2935 (single donor)	Improved version of part number CC-2517. Offers faster proliferation rates than HUVEC isolated in EGM™ Growth media. No exogenous VEGF
Isolated in EGM™-2 Media (CC-3162)	C2517A 🔥 (single donor) C2519A 🔥 (pooled donor) 00191027 (XL size)	Isolated in presence of growth factors such as VEGF, rhFGF and others. Does not contain BBE
Pre-screened HUVECs in EGM™-2 Media (CC-3162)	C2517AS (single donor) C2519AS 🔥 (pooled donor)	Screened for angiogenesis markers and test positive for expression of eNOS, Axl, Tie-2 and VEGFr2

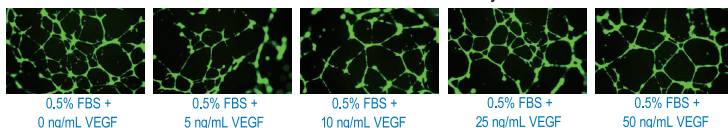
* 含有牛隻來源成分

測試多種條件，提供最佳血管新生操作條件

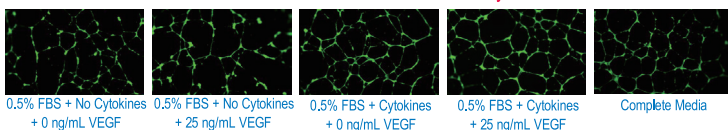
Effect of **FBS** on Tube Formation (non-transfected HUVEC)



Effect of **VEGF** on Tube Formation in the Absence of Other Cytokines non-transfected HUVEC



Effect of VEGF on Tube Formation in the Presence of **Other Cytokines**



代數年輕
不需 Coating

各家比較表

	LONZA	A company	B company
捐贈者來源	single and pooled	x	single
細胞數	$> 5 \times 10^5$	$> 5 \times 10^5$	$> 5 \times 10^5$
代數	1st passage	1st passage	2nd passage
population doubling	15	15	x
生長速度	快	快	x
是否需要額外 coating	NO	YES	YES

Reference

- Engineered composite tissue as a bioartificial limb graft.
2015 Aug;61:246-56. doi: 10.1016/j.biomaterials.2015.04.051. Epub 2015 May 22.
- In vitro* reconstruction of branched tubular structures from lung epithelial cells in high cell concentration gradient environment.
Sci Rep.2015 Jan 27;5:8054. doi: 10.1038/srep08054.
- Piperine Congeners as Inhibitors of Vascular Smooth Muscle Cell Proliferation.
Planta Med. 2015 Aug;81(12-13):1065-74. doi: 10.1055/s-0035-1546165. Epub 2015 Jul 1.



細胞種植密度

體外細胞培養，適宜的接種密度，可促進細胞增生。接種密度太低或太高都不利細胞的生長增殖。如果培養基與細胞的容積比例大於 2000 : 1，生長物質擴散到細胞外過多，細胞內濃度低於可耐受的濃度，此時細胞無法增生，且培養基的 pH 值變鹼而抑制細胞生長，甚至導致細胞變圓無法貼覆，最後可能引起細胞死亡；然而，若是接種密度太高，每個細胞周圍培養基的容積比降至 0.007 mm^2 以下，由於擴散率降低，細胞內生長物質的濃度增加，容易使排出物或其他代謝產物達到飽和，能量來源也很快耗盡，因此也會防礙細胞的增生。因此選擇適當的種植密度是非常重要的。

LONZA 針對每種細胞，皆會給予適當的種植密度以及培養液使用量的建議，讓使用者能快速上手，免於培養上的困擾。

HUVEC 建議種植密度 $2,500 \text{ cells/cm}^2$

Flasks	Effective Growth Area	Cell Culture Medium Required	Initial Number of Cells to Seed at $2,500 \text{ cells/cm}^2$	Initial Number of Cells to Seed at $3,500 \text{ cells/cm}^2$	Initial Number of Cells to Seed at $5,000 \text{ cells/cm}^2$
T-25	25 cm^2	5 ml	62,500	87,500	125,000
T-75	75 cm^2	15 ml	187,500	262,500	375,000
T-150	150 cm^2	30 ml	375,000	525,000	750,000

Dishes	Effective Growth Area	Cell Culture Medium Required	Initial Number of Cells to Seed at $2,500 \text{ cells/cm}^2$	Initial Number of Cells to Seed at $3,500 \text{ cells/cm}^2$	Initial Number of Cells to Seed at $5,000 \text{ cells/cm}^2$
35 mm	9.6 cm^2	2 ml	20,000	28,000	40,000
60 mm	21 cm^2	5 ml	52,500	73,500	105,000
100 mm	55 cm^2	11 ml	137,500	192,500	275,000
150 mm	148 cm^2	30 ml	370,000	518,000	740,000

Multiwell Plates	Effective Growth Area per well	Cell Culture Medium Required per well/total	Initial Number of Cells to Seed at $10,000 \text{ cells/cm}^2$
6-well	9.60 cm^2	2 ml / 12 ml	96,000
12-well	3.80 cm^2	1 ml / 12 ml	38,000
24-well	2.00 cm^2	0.5 ml / 12 ml	20,000
48-well	0.75 cm^2	150 μl / 7 ml	7,500
96-well	0.32 cm^2	100 μl / 10 ml	3,200