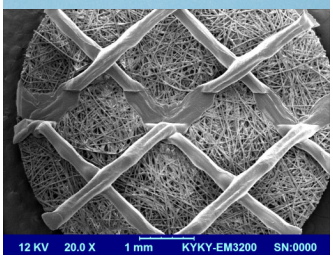
LEPURE

LeProlif ™ Disk

Datasheet

LeProlif™ Disk is a solid support material for the growth of anchorage-dependent cells like mammalian, animal and insects cells. It provides huge surface area for cells growing by its fibrous structures. New generation of superior cells attachment technology improves cell growth density and obtains abundant of target products (e.g. viral vaccines, secretory protein etc.). LeProlif™ Disk can be used in single-use bioreactor bags, packed-bed bioreactors or other culture vessels. LePure would also provide one-stop solution of LeKrius® CCS rocking cultivation platform for cell culture process.



Advantages

01.
>1300 cm^2/g area surface, higher yields of cells cultivation

02.
New generation of superior cells attachment technology, prominent aging resistance, enhance cultivation efficiency

03.
USP Class VI compliance and animal free origin

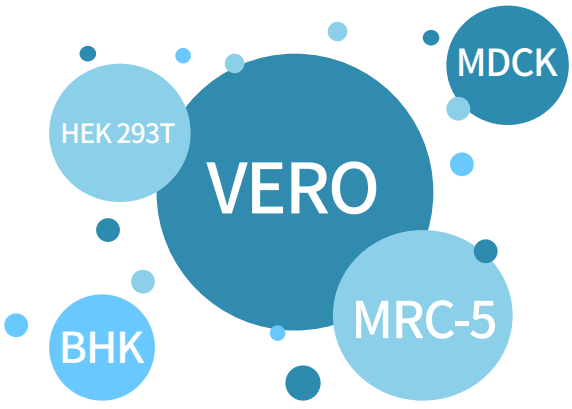
04.
Convenient and controllable cell culture process, easily realize product harvest

05.
Withstand gamma irradiation and autoclave sterilization, easily replace incumbent without changes

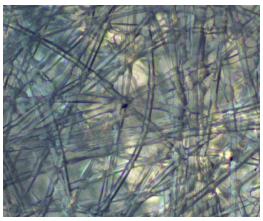
06.
Strict quality control and risk screening, strong supply chain, largely reduce delivery time

Applications

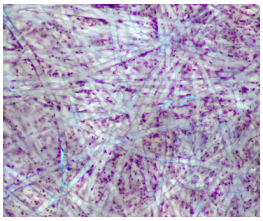
Cultured cell lines：VERO、MRC-5、MDCK、BHK、293T、CHO etc.



Optical micrographs

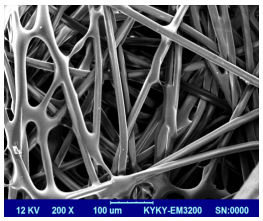


Original morphology

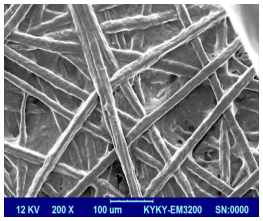


ero growth on carriers morphology (HEstaining)

Scanning electron micrographs



Original morphology



Vero growth on carriers morphology

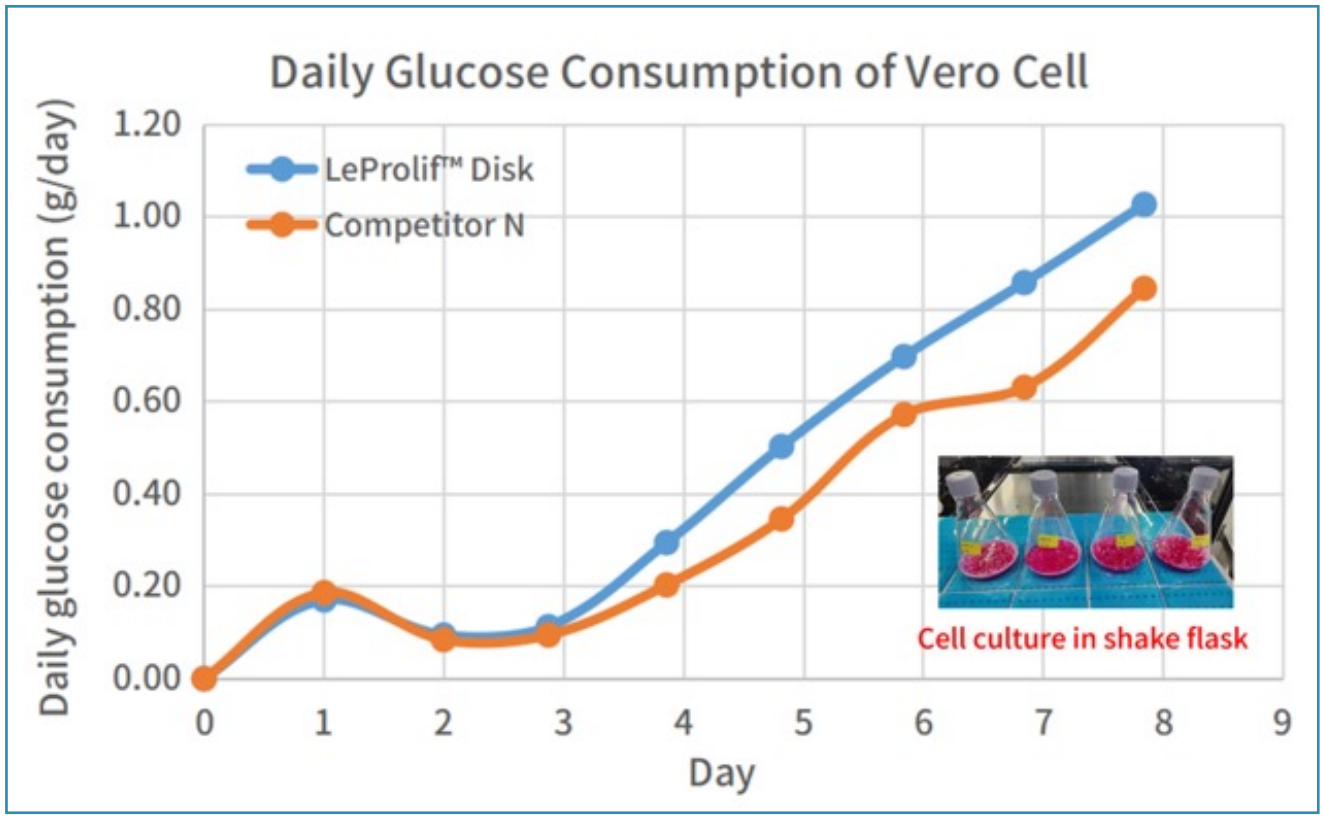
Property tests

LeProlif™ Disk with new generation of superior cells attachment technology (intellectual patented) shows significant advantages in cells adhesion and proliferation. Vero cells and 293T cells are selected to conduct dynamic cell culture experiments to test LeProlif ™ Disk comparing with competitor N.

The experimental parameters of dynamic culture of Vero cells in shake flask are as follows: the culture volume is 200mL, the dosage of the cell carrier is 6g (30 g/L), the culture medium is DMEM+5% FBS, and the initial number of inoculated cells is 0.52E8. After 8 days of cultivation, the number of cells using LeProlif™ Disk has increased to 5.56E8, while the number of cells in competitive N has increased to 4.59E8. According to daily average glucose consumptions of Vero cells in the figure below, we could tell the different performance of LeProlif™ Disk and competitor N separately.

Vero dynamic cell culture, daily average glucose consumptions (g/day)——LeProlif ™ Disk vs. Competitor N

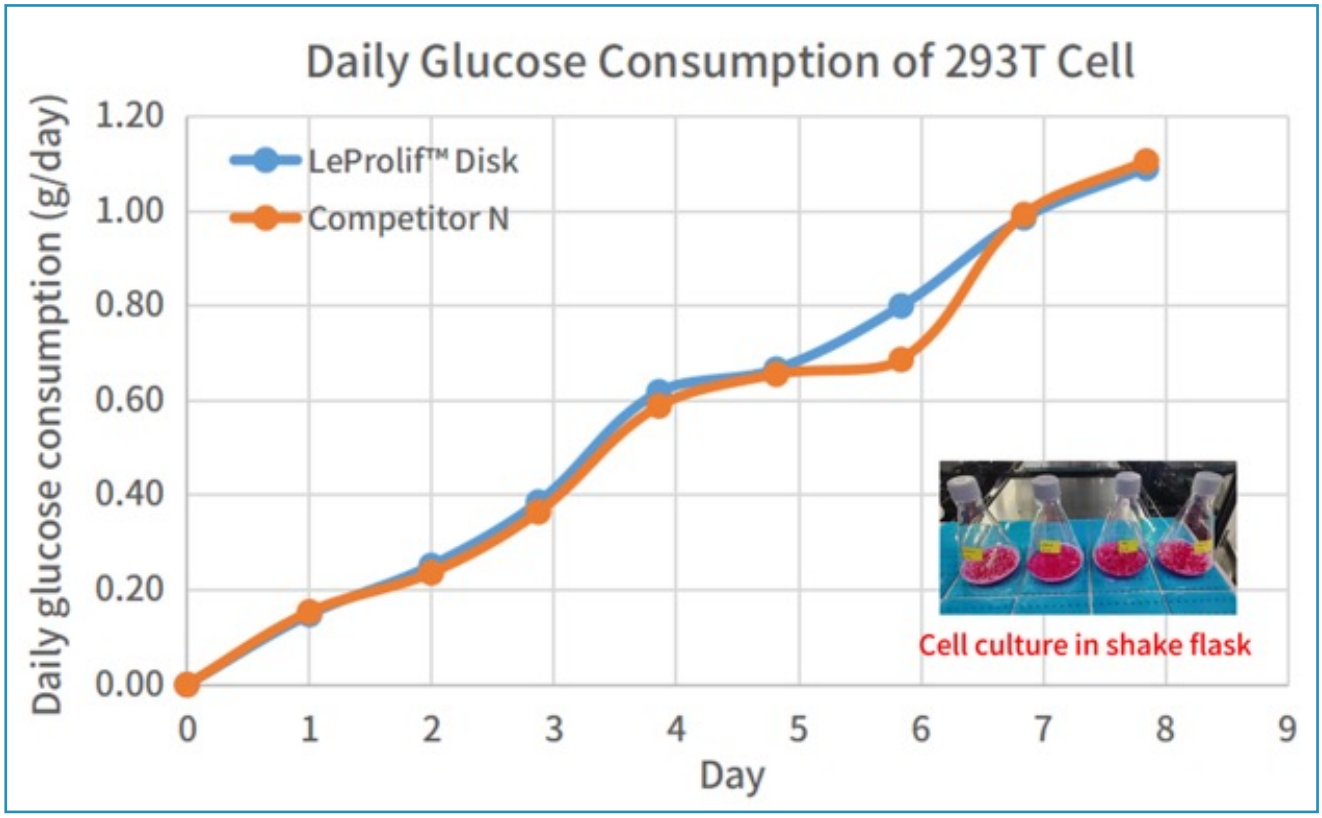
Day / Comparison	Day0	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8
LeProlif ™ Disk	0.00	0.17	0.09	0.11	0.29	0.50	0.70	0.86	1.03
Competitor N	0.00	0.19	0.08	0.09	0.20	0.35	0.57	0.63	0.85



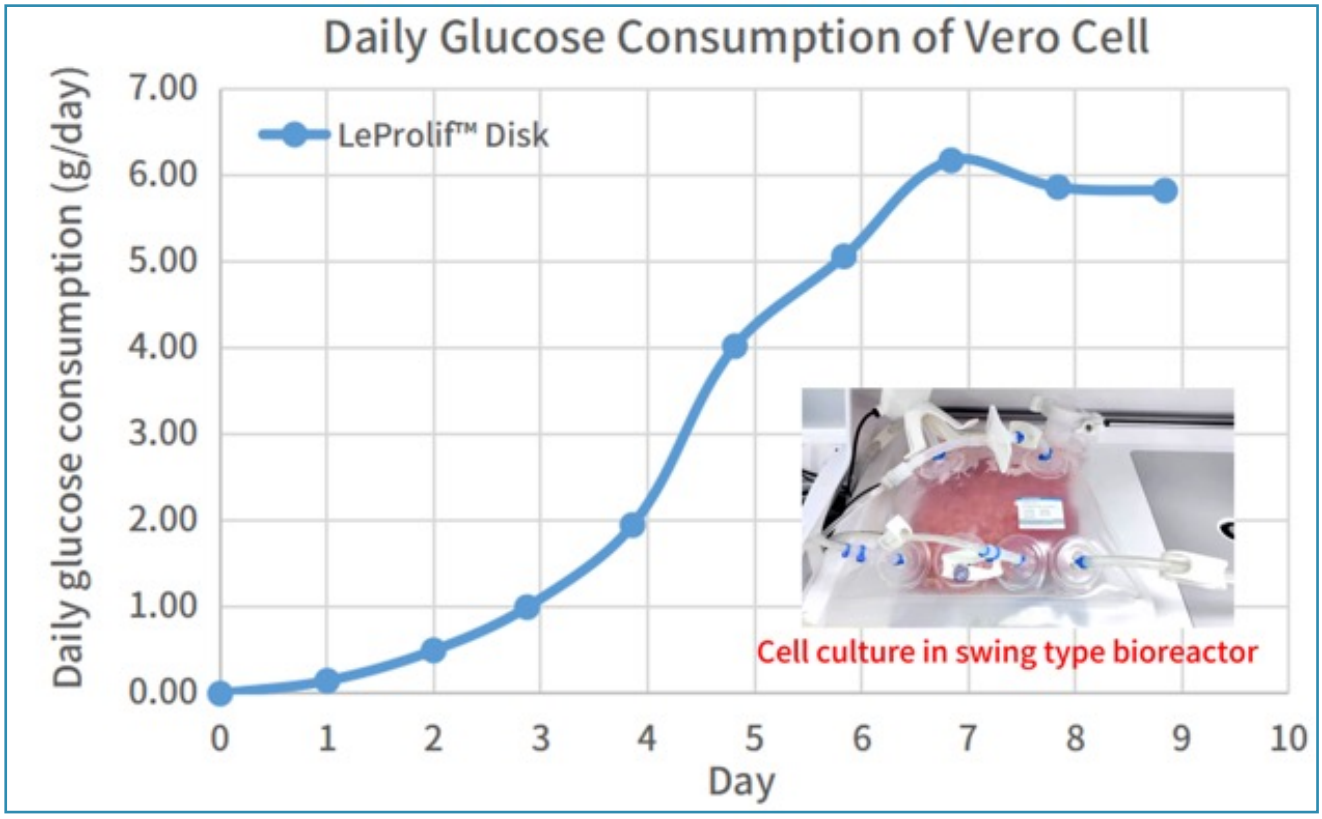
The experimental parameters of dynamic culture of 293T cells in shake flask are as follows: the culture volume is 200mL, the dosage of the cell carrier is 6g (30 g/L), the culture medium is DMEM+10% FBS, and the initial number of inoculated cells is 0.7E8. After 8 days of cultivation, the number of cells using LeProlif ™ Disk has increased to 8.49E8, while the number of cells in the competitive N has increased to 7.48E8. By comparing the daily average glucose consumptions of 293T cells in the figure below, we can see the different performance of LeProlif™ Disk and competitor N separately.

293T dynamic cell culture, daily average glucose consumptions(g/day)LeProlif ™ Disk vs. Competitor N

Day / Comparison	Day0	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8
LeProlif ™ Disk	0.00	0.15	0.25	0.39	0.62	0.67	0.80	0.99	1.09
Competitor N	0.00	0.15	0.24	0.37	0.59	0.66	0.69	0.99	1.11



The experimental parameters of Vero cell culture in rocking cultivation system are as follows: culture volume 1L, the dosage of LeProlif ™ Disk is 30g (30g/L), the culture medium is DMEM+5% FBS, and the initial number of cells inoculated is 3.5E8. After 9 days of culture, the number of cells increased to 3.9E9. The figure below shows the daily average glucose consumptions of Vero cells in rocking cultivation system.



Product Parameters

Characteristics

Materials	Polyethylene terephthalate（PET）、 polypropylene（PP）
Size	Diameter ~6mm. Thickness ~0.7mm
Surface area	>1300 cm^2/g
Sterilization method	Gamma irradiation (⩽ 50kGy) or autoclave sterilization (121°C , 30min)
Concentration	30~50 g/L

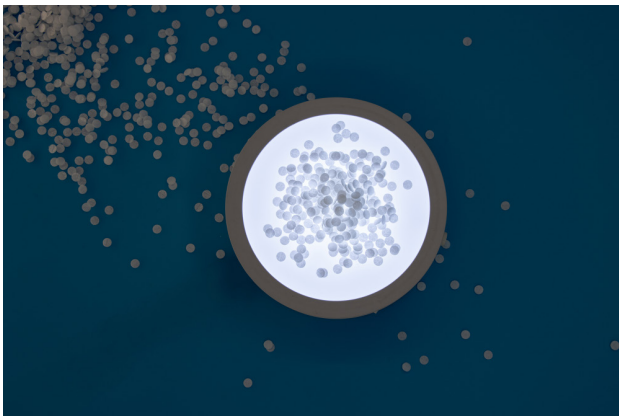
Compliance

Test standards	Test discriptions	Test result
USP <85>	Bacterial endotoxin	<0.05 (EU/mL)
USP <87>	Cytoxicity	Pass “0 grade”
USP class VI <88>	Biological reactivity test, in vivo	Pass
ISO 11737-1	Bioburden	<0.5 (CFU/g)
E.P.5.2.8	ADCF	Pass

Purchase Information

LeProlif ™ Disk

Packaging specs	Unsterilized	Sterilized（Gamma）
50g	LPD0050	LPD0050G
250g	LPD0250	LPD0250G
1000g	LPD1000	LPD1000G



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