

## Generation and Propagation of EPS cells (LCDM Cocktail)

This is intended as a guide only; for full experimental details please read the [reference](#) provided.

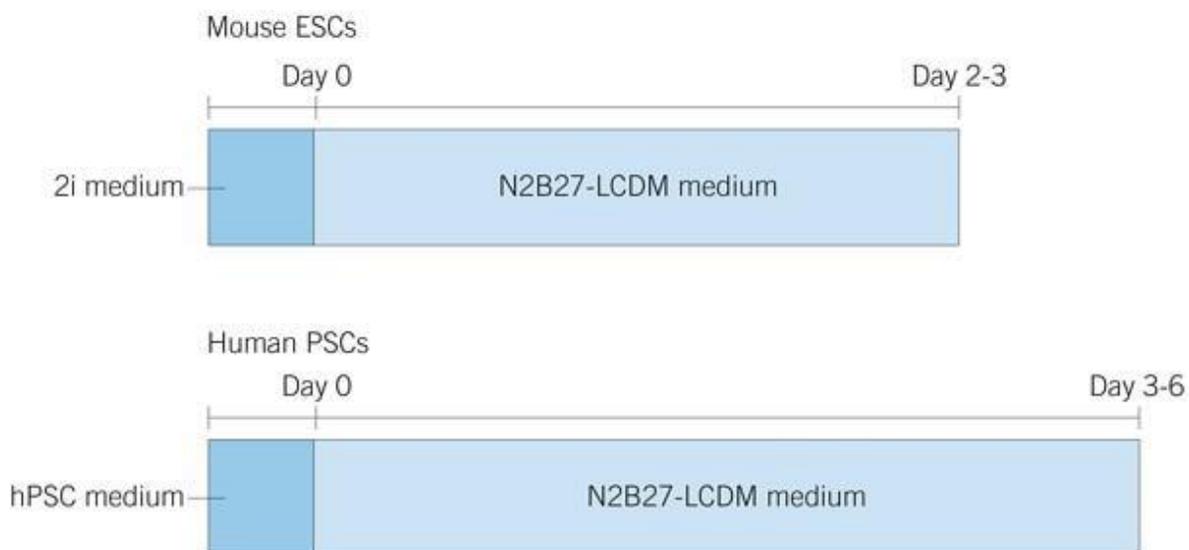
### In Brief

Yang *et al.* describe a protocol for the generation of extended pluripotent stem (EPS) cells with the potential to give rise to both embryonic and extraembryonic cell lineages *in vivo*. hPSCs were seeded onto MEF feeder layers and cultured in conventional hPSC medium. The medium was then changed to LCDM-containing medium resulting in the conversion and long-term maintenance of dome-shaped colonies of EPS cells. Derived EPS cells had the ability to differentiate into all three embryonic germ layers, showed genome stability after more than 50 passages, and had transcriptomic features distinct from mouse ESCs or naive hPSCs. The LCDM condition was also used to derive EPS from human or mouse blastocysts, and from human embryonic fibroblasts. A single mouse EPS cell injected into an 8-cell stage mouse embryo differentiated to both the trophoectoderm and inner cell mass.



## Cocktails

2i Medium (mouse ESC)		hPSC Medium (human PSCs)		N2B27-LCDM Medium	
<a href="#">Y-27632</a> (Cat.No. 1254)	10 µM	<a href="#">Y-27632</a> (Cat.No. 1254)	10 µM	hLIF	10 ng/ml
				<a href="#">CHIR 99021</a> (Cat.No. 4423)	1 µM
				<a href="#">(S)-(+)-Dimethindene maleate</a> (Cat.No. 1425)	2 µM
				<a href="#">Minocycline hydrochloride</a> (Cat.No. 3268)	2 µM
				<a href="#">endo-IWR 1</a> (Cat.No. 3532)	0.5 - 1 µM
				<a href="#">Y-27632</a> (Cat.No. 1254)	2 µM



## Reference

Yang *et al.* (2017) Derivation of pluripotent stem cells with *in vivo* embryonic and extraembryonic potency. Cell **169** 243. PMID: [28388409](https://pubmed.ncbi.nlm.nih.gov/28388409/)