

Product Description

Renal mesangial cells are perivascular cells located within the central portion of the glomerular tuft between capillary loops, constituting 30-40% of the total glomerular cell population [1]. They regulate the intraglomerular capillary flow and ultrafiltration surface via mesangial cell contraction and release of growth factors and vasoactive agents [2]. By pinocytosis and phagocytosis, mesangial cells remove local accumulation of macromolecules in the mesangial space [3]. Mesangial cells also synthesize, assemble and control turnover of the mesangial matrix. Overproduction of mesangial cells has been observed in various glomerular diseases, such as IgA nephropathy, mesangioproliferative glomerulonephritis, lupus nephritis, glomerulosclerosis and diabetic nephropathy [4]. Such critical involvements suggest renal mesangial cells are an ideal model for studying mesangial injury and glomerular functions under both physiological and pathophysiological conditions.

iXCells Biotechnologies provides high quality Mouse Renal Mesangial Cells (MRMC), which are isolated from postnatal day 2 mouse kidney and cryopreserved at P1, with >0.5 million cells in each vial. MRMC express fibronectin, Thy-1, and smooth muscle actin. They are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi and can further expand for 5 population doublings in Mesangial Cell Growth Medium (Cat# MD-0051) under the condition suggested by iXCells Biotechnologies.

Product Details

Tissue	Postnatal day 2 mouse kidney (strain C57BL/6 or CD1)
Package Size	0.5 million cells/vial
Passage Number	P1
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Mesangial Cell Growth Medium (Cat# MD-0051)

References

- [1] Olivetti G, Anversa P, Rigamonti W, Vitali-Mazza L, Loud AV. (1977) "Morphometry of the renal corpuscle during normal postnatal growth and compensatory hypertrophy. A light microscope study." J Cell Biol. 75: 573-85.
- [2] Gruden G, Thomas S, Burt D, Zhou W, Chusney G, Gnudi L, Viberti G. (1999) "Interaction of angiotensin II and mechanical stretch on vascular endothelial growth factor production by human mesangial cells." J Am Soc Nephrol. 10: 730-7.
- [3] Gómez-Guerrero C, Suzuki Y, Egido J. (2002) "The identification of IgA receptors in human mesangial cells: in the search for "Eldorado"." Kidney Int. 62: 715-7.
- [4] Abboud HE. (2012) "Mesangial cell biology." Exp Cell Res. 318: 979-85.

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