Product Description

Smooth muscle contraction is the fundamental event in gastrointestinal motion. Inflammation of the human intestine causes increased levels of smooth muscle-specific actin, which in turn promotes the thickening of the smooth muscle layers. The increased smooth muscle actin may affect force production and further demonstrates the plasticity of smooth muscle cells in the inflamed intestine [1]. Studies also show that human intestinal smooth muscle cells respond to IL-1beta and TNF-alpha stimulation by releasing IL-6, which may significantly contribute to the overall systemic inflammatory response [2]. A better understanding of the molecular mechanisms that control colorectal smooth muscle tone is essential for the treatment of colorectal disorders. The availability of human rectal smooth muscle cells makes it more feasible to study the contractile and proliferative tissue responses of smooth muscle in human colorectal disorders.

iXCells Biotechnologies provides high quality Human Rectal Smooth Muscle Cells (HRSMC), which are isolated from human rectum and cryopreserved at P1, with >0.5 million cells in each vial. HRSMC express ±-smooth muscle actin and desmin and are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fung. HRSMC can further expand for 16 population doublings in Smooth Muscle Cell Growth Medium (Cat # MD-0034) under the condition suggested by iXCells Biotechnologies.

Product Details

Tissue	Human rectum
Package Size	0.5 million cells/vial
Passage Number	P1
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Smooth Muscle Cell Growth Medium (Cat # MD-0034)

References

[1]. Blennerhassett, M. G., Bovell, F. M., Lourenssen, S., McHugh, K. M. (1999) Characteristics of inflammation-induced hypertrophy of rat intestinal smooth muscle cell. Dig Dis Sci. 44(7):1265-72.
[2]. Ng, E. K., Panesar, N., Longo, W. E., Shapiro, M. J., Kaminski, D. L., Tolman, K. C., Mazuski, J. E. (2003) Human intestinal smooth muscle cells are potent producers of IL-6. Mediators Inflamm. 12(1):3-8.

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