Nanjing Medical University Experimental Animal Department
Application for Ethical Approval for Research Involving Animals

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Name of Principal Investigator	Qiyun Tang	Contact Person	Qiyun Tang
Department	Department of Gastroenterology, the First Affiliated Hospital of Nanjing Medical University	Contact Tel. No.	(+86)13770642446
Project Title	SGK1 inhibits cellular apoptosis and promotes proliferation via the MEK/ERK/p53 pathway in colitis		
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	Name	Title	Animal User Permit No.	Tel.No.
Additional Research Personnel	Qiyun Tang	MD	2122402	(+86)18262638911

Background: Crohn's disease (CD) is a chronic, relapsing and debilitating colitis. Until now, many therapies have been tested in clinical patients with active CD but have shown no obvious effects. Serum-and-glucocorticoid-inducible-kinase-1(SGK1), a potential immunomodulatory factor, is involved in cell signaling pathways and mediates cellular apoptosis, migration, proliferation, and epithelial transport. It is well recognized that impairment of the epithelial barrier is one of the most important factors in the origin of CD.

Study objectives: To investigate the role of serum-and-glucocorticoid-inducible-kinase-1(SGK1) in colitis and to uncover potential pathological mechanisms.

Experimental design: Acute CD models were weighed and induced by light intra-rectal instillation of a solution consisting of 50μl of hapten agent TNBS solution in 50μl absolute ethyl alcohol via a 3.5F catheter under deep anesthesia, induced by intraperitoneal injection of 3% pentobarbital, Mice were killed by cervical dislocation on days 1, 2, 3, 5, 7, and 10 (n = 4per day). To evaluate the degree of colitis, the mice were weighed daily, and fecal consistency and presence of bloody stool were detected and recorded for 10 days after TNBS-treatment.