Figure S1. Characterization of mouse BM-MSCs. (A): BM-MSCs of passage 3 were tested by flow cytometry showing positive for CD29 and Sca-1, and negative for CD11b, CD45, CD31 and CD34. (B): BM-MSCs of passage 3 were tested for their ability to differentiate into adipogenic, osteogenic, and chondrogenic lineages.
**Figure S2.** BM-MSCs migrate to the leading edge of the wounded cornea. MSCs were labeled with the fluorescent dye CM-DiI before transplantation. Corneas were collected 48 h after injury. Representative images of frozen corneal sections and HE showing MSCs were able to migrate to the limbus, repaired, and wound edge of the cornea (epi=epithelium; str=stroma).
Figure S3. TSG-6 suppressed leukocyte infiltration in diabetic cornea. Corneas were harvested 72 h after surgery, cut into pieces, digested and analyzed by flow cytometry. Cell number of CD45+ immune cells infiltrated into cornea were calculated.
**Figure S4. TSG-6 promotes alternative polarization and function of macrophage in vitro.**

**(A-D):** Macrophages of peritoneal cavity from diabetic mice were isolated, and treated with LPS in the presence of MSCs conditioned medium (MSC-CM) or TSG-6 for 24 h. Expression levels of mRNA of TNF-α, iNOS, ARG-1, and IL-10 were determined by real-time RT-PCR. 

**(E-F):** Macrophage function was tested by phagocytosis assay. Results are expressed as mean±SD; *p<0.05.
Figure S5. **CD44 is mainly expressed in the basal layer of corneal limbal epithelium.**

Representative histological appearance of human cornea showing strong density of CD44 staining in the basal layer of cornea limbal epithelium.