The cell surface hyaluronidase TMEM2 plays an essential role in mouse neural crest cell development and survival

Toshihiro Inubushi, Yuichiro Nakanishi, Makoto Abe, Yoshifumi Takahata, Riko Nishimura, Hiroshi Kurosaka, Fumitoshi Irie, Takashi Yamashiro, Yu Yamaguchi

Immunofluorescence image of an E11.0 Tmem2-FLAG<sup>+</sup> knock-in reporter embryo stained for TMEM2 (with anti-FLAG antibody, green) and hyaluronan (with biotinylated hyaluronan-binding protein, red). Nuclei were counterstained with DAPI (Blue). TMEM2 is strongly expressed in tissues populated by neural crest derivatives, including the facial prominence, the branchial arches, the dorsal root ganglia, and the developing heart. Double-staining for TMEM2 and hyaluronan reveals that TMEM2 and hyaluronan exhibit roughly inverse patterns of distribution, consistent with the notion that matrix-associated HA is removed from sites where TMEM2 is actively expressed.

Image credit: Toshihiro Inubushi