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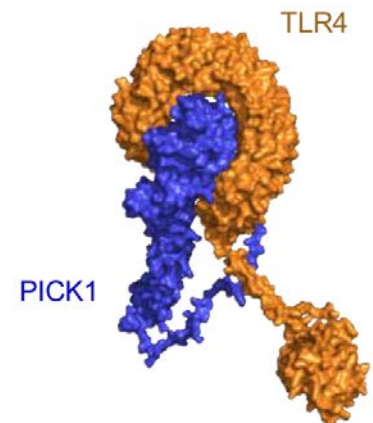
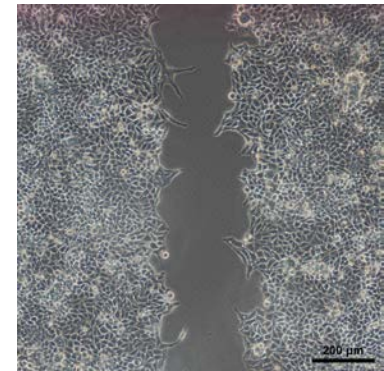
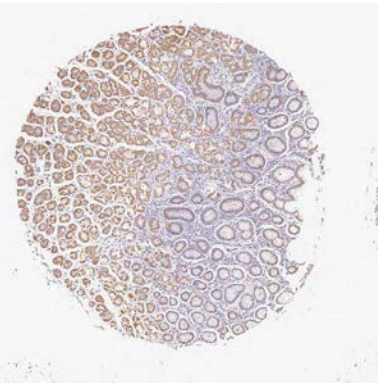
# PICK1 modulates the proliferation and migration of gastric cancer cells by regulating TLR4

**Key words:** Protein interacting with C kinase 1 (PICK1); Gastric cancer; Toll-like receptor 4 (TLR4); Myeloid differentiation primary response 88 (MyD88) signaling pathway; Autophagy

# Research Summary

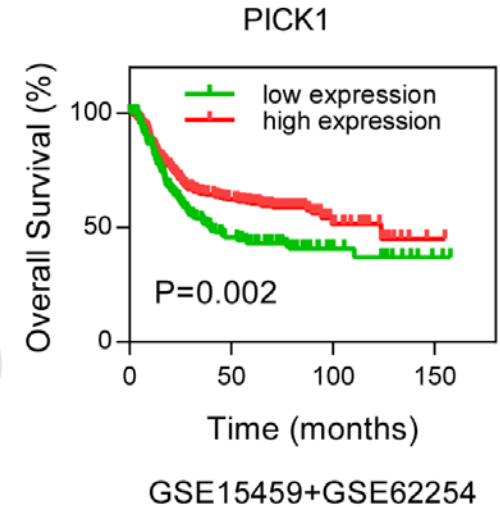
This research mainly focused on the expression and effects of PICK1 on gastric cancer cells and interaction with TLR4. It was organized around the following aspects:

- Expression of PICK1 in gastric cancer
- Effect of PICK1 overexpression on the growth and cell cycle of gastric cancer cells
- Effects of PICK1 overexpression on migration and TLR4 protein expression of gastric cancer cells
- Effect of PICK1 down-regulation on proliferation and TLR4 protein expression in gastric cancer cells
- Interaction between PICK1 and TLR4
- Binding energy of PICK1 and TLR4



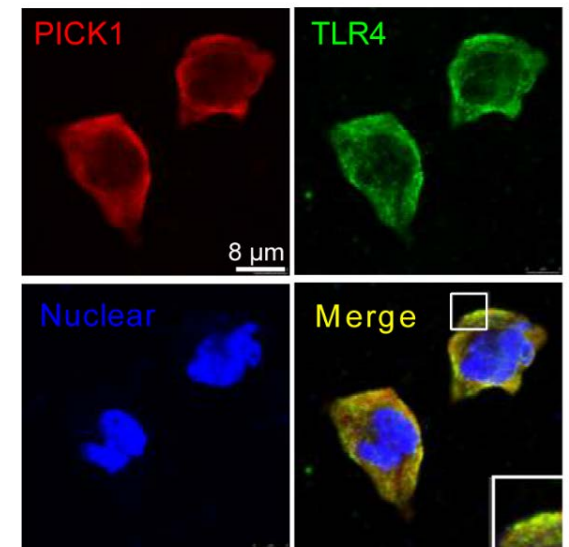
# ***Innovation points***

- **Revealing the relationship between PICK1 and the prognosis of gastric cancer**



- **Discovering the relationship between PICK1 and TLR4 protein interaction**

- **Highlighting PICK1's role in TLR4 trafficking and degradation via autophagy**



# ***Innovation points***

**This contributes novel perspectives on PICK1's cellular functions, providing potential therapeutic implications for gastric cancer.**

**Figure 1 | Expression and Kaplan-Meier survival analysis of protein interacting with C kinase 1 (PICK1).**

**Figure 2 | PICK1 overexpression inhibits AGS cell growth and induces cell cycle arrest.**

**Figure 3 | PICK1 overexpression inhibits cell migration and toll-like receptor 4 (TLR4) protein expression in gastric cells.**

**Figure 4 | Effects of downregulation of PICK1 gene on AGS cells.**

**Figure 5 | Interaction between PICK1 and TLR4.**

**Figure 6 | Binding energy of PICK1 and TLR4 by molecular dynamics simulations.**