**BIOLOGICAL ACTIVITY:**

Glycyrrhizic acid is a triterpenoid saponin, extracted from the licorice root, with anti-tumor, anti-diabetic activities.

**In Vitro:** Glycyrrhizic acid shows a series of anti-cancer-related pharmacological activities, such as broad-spectrum anti-cancer ability, resistance to the tissue toxicity caused by chemotherapy and radiation, drug absorption enhancing effects and anti-multiphase resistance (MDR) mechanisms, as a carrier material in drug delivery systems\(^1\). In intestinal NCI-H716 cells that secretes GLP-1, Glycyrrhizic acid promotes GLP-1 secretion with a marked elevation of calcium levels. Glycyrrhizic acid can enhance GLP-1 secretion through TGR5 activation\(^2\).

**In Vivo:** In type 1-like diabetic rats induced by streptozotocin (STZ-treated rats), Glycyrrhizic acid increases the level of plasma GLP-1, which is blocked by triamterene at a dose sufficient to inhibit Takeda G-protein-coupled receptor 5 (TGR5)\(^1\).

**References:**
