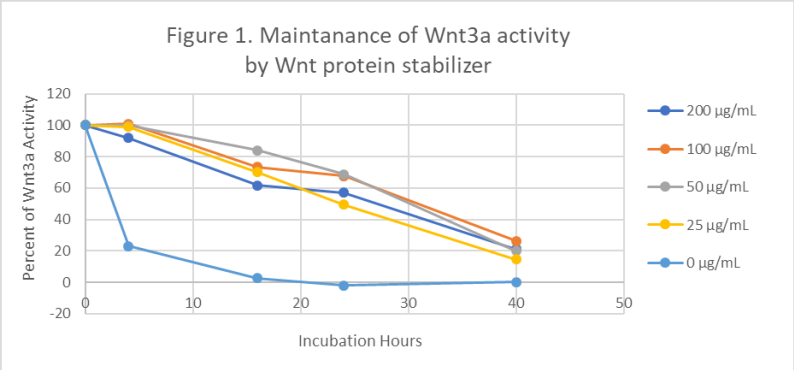
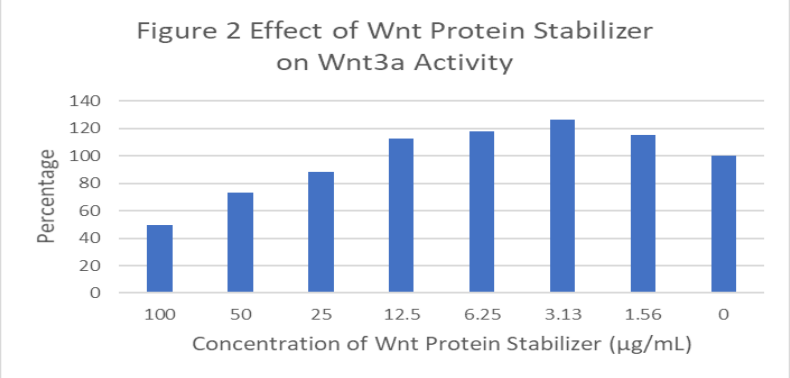
TIME Bioscience
A specialized producer of Wnt signaling products

Wnt Protein Stabilizer

Catalog Number:	bWps
Source:	Mammalian proteins
Application:	For maintenance of Wnt protein activity in serum-free culture conditions
Description	In serum free culture conditions, Wnt proteins are very unstable, losing their activity completely in 16 hours. The instability of Wnt proteins limits their applications, especially for the application for stem cell and organoid culture. The Wnt protein stabilizer maintains Wnt protein activity in serum-free culture conditions for more than 30 hours. In the presence of Wnt protein stabilizer, purified Wnt3a can support even colon organoid cultures that need strong Wnt activity.
Concentration	20 mg/mL of proteins and other components
Activity:	Effects of Wnt protein stabilizer on Wnt3a bioactivity has been measured using TCF-based Wnt reporter assay. A. Maintenance of Wnt Protein Activity: Wnt3a (50 ng/mL) was incubated in 37°C, 5% CO_2 incubator in serum-free DMEM in the presence of various concentrations of the Wnt protein stabilizer for different time points. Wnt3a activity was measured using TCF-based Wnt reporter stable cell line (Time Bioscience Catalog: WRNIH3T3A). The half-life of Wnt3a in the absence of Wnt protein stabilizer is 2 hours and Wnt3a completely lost its bioactivity within 16 hours in serum-free medium (Figure 1). Whereas, the half-life of Wnt3a in the presence of the Wnt protein stabilizer is about 24-30 hours (Figure 1). B. Inhibition of Wnt protein stabilizer on Wnt3a activity: Wnt3a (20 ng/mL) was mixed with various concentrations of Wnt protein stabilizer. The Wnt3a activity was measured immediately by TCF-based Wnt reporter assay (Above). In Figure 2, the Wnt3a activity in the absence of Wnt protein stabilizer was set as 100%. The figure 2 shows that Wnt protein stabilizer doesn't inhibit Wnt3a activity at concentrations lower than 12.5 ng/mL.





Formulation Proprietary formula.

Handling and Storage Store at 2° - 8°C for months and below -20 °C for years.

This Wnt protein stabilizer is designed especially for protecting Wnt proteins from losing their activity in serum-free medium, such as in stem cell or organoid cultures. To use it, take an aliquot calculated based on the volume of culture medium and add it into culture medium before or after addition of Wnt proteins; mix well but no vortex. The stock concentration is 20 mg/mL and the working concentrations are between 5 and 50 µg/mL. High concentrations of the Stabilizer inhibit Wnt activity. End users may titrate it to find out an optimal concentration.

Reference N/A