SALK INSTITUTE
FOR BIOLOGICAL STUDIES

Unique Reagents to Detect Wnt Signaling *in Vitro* and *in Vivo*

Inventors: Geoffrey Wahl and Jennifer Green
Potential Uses: high-throughput screening of Wnt modulating compounds; *in vitro* and *in vivo* validation of efficacy and specificity of Wnt modulating compounds

The Wnt pathway, well known to play a role in tumorigenesis, is an attractive target for anticancer therapy. There is a growing need to develop better tools to screen and validate Wnt modulating compounds.

Salk investigators have developed two novel vectors that can be used individually or used together to distinguish a Wnt-responsive sub-population of cells from a larger cell population. One vector is generally valuable for monitoring xenograft tumor growth and recovering such tumor cells without the need for flow cytometry. A second vector is a Wnt-specific reporter that seems to be the most sensitive and versatile Wnt reporter currently available. When these vectors are used to label cancer cells grown as xenografts, bioluminescent and fluorescence measurements can be taken repeatedly and non-invasively with a lower detection threshold than manual palpation. Labeled tumor cells can be recovered and introduced into in vivo models for efficient tumorigenesis studies. Cancer cell lines stably expressing either one or both vectors are also available for identification and characterization of Wnt modulating compounds.

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