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(54) Title: METHODS OF DETERMINING INTERFERON HAVING DIRECT INHIBITORY EFFECTS ON TUMORS AND USES THEREOF

(57) Abstract: The invention provides novel methods of determining or comparing potency of a test interferon relative to rSIFN-co (an interferon having therapeutic effects on solid tumors); methods of establishing substantial equivalence between a test interferon and rSIFN-co; methods for down-regulation of expression of Wnt-related receptors or co-receptors, such as LRP6/FZD6; down-regulation of expression of Wnt-related target genes, such as, Axin2, CD24, Survivin and/or ID2; inhibition of beta-catenin/TCF transcriptional activities; suppression of expression of beta-catenin; up-regulation of tumor suppressor genes, such as DKK-3, BATF2 and/or KLF4; inhibition of tumor cell viability *in vitro*; inhibition of tumor growth and metastases *in vivo*; inhibition of tumor cell migration, pseudopod formation, and colony formation *in vitro*; as well as methods for determining potency of a test interferon, kits for determination of such methods, and an interferon or an interferon substitute having said activities.



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