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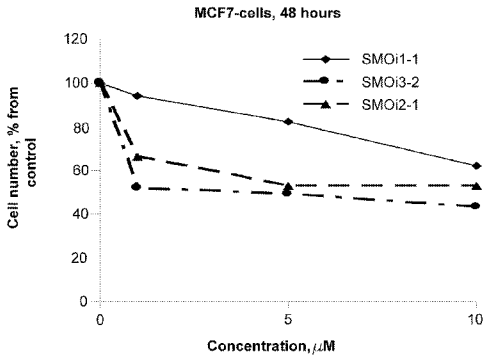
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(54) Title: SMOOTHENED POLYPEPTIDES AND METHODS OF USE



(57) Abstract: Disclosed is an isolated or purified polypeptide or peptidomimetic comprising an amino acid sequence of a portion of a Smoothened (SMO) protein, wherein the portion comprises an amino acid sequence of any of the intracellular loops of the SMO protein, a functional fragment thereof, or a functional variant of either the portion or the functional fragment, wherein the functional fragment comprises at least 7 contiguous amino acids of the intracellular loops, and wherein the functional fragment or functional variant inhibits proliferation of a diseased cell, or a fatty acid derivative thereof. Related conjugates, nucleic acids, recombinant expression vectors, host cells, and pharmaceutical compositions are further provided. Methods of inhibiting proliferation of a diseased cell, treating or preventing cancer, treating a neoplasm or psoriasis, and inhibiting the expression of genes involved in the Hedgehog signaling pathway, thereby inhibiting the Hedgehog signaling pathway, are furthermore provided by the invention.

WO 2008/070357 A2