innovations

from The University of Vermont

TITLE: METHODS FOR DETERMINING NOTCH SIGNALING AND USES THEREOF

INVENTOR: Cedric S. Wesley

DESCRIPTION: Notch signaling regulates the differentiation of almost all tissue in all animals from worms to humans and is critical for normal development. Loss or abnormal Notch signaling is linked to numerous cancers, birth defects and neurological diseases, including dementia, stroke and Alzheimer's, but until now identification of the level of Notch signaling in vivo has been notoriously difficult. This invention provides methods for the detection of Notch signaling in vivo based on a new discovery that the level of certain truncated Notch polypeptides and the ratio of the amount of such Notch truncated polypeptides to the amount of full-length Notch molecules is an accurate indicator of the level of Notch signaling. As a result, simple reagents and kits can provide researchers and clinicians a direct method of measuring Notch levels in vivo for basic research, diagnostics and screening for therapeutics.

ADVANTAGES: To date there is no reliable, predictive, and generally applicable assay or method to determine the level of Notch signaling in vivo in the course of normal tissue differentiation, normal organ development and abnormal or disease development. This invention will enable determination of Notch signaling in all of these situations.

PATENT STATUS: Patent pending

LICENSING STATUS: Worldwide rights available

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