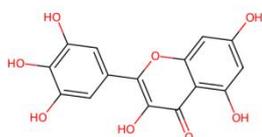


Wnt Signaling

The Wnt signaling pathway family includes three pathways, all activated by Wnt binding to Frizzled. The canonical Wnt pathway transmits signals from Frizzled to Dishevelled, which propagates the signal to a degradation complex that binds β -catenin. In the inactive state, this complex promotes β -catenin degradation. Upon activation, β -catenin is dephosphorylated and enters the nucleus, promoting cell proliferation, differentiation, and development. The non-canonical/calcium-dependent Wnt pathway regulates calcium levels and adhesion. In this pathway, Dishevelled interacts with G proteins to stimulate calcium release, activating calcineurin and CaMK, which activates NFAT. Lastly, the non-canonical/planar cell polarity pathway transduces signals from Dishevelled to Rho and ROCK, promoting actin polymerization and cytoskeletal remodeling. Several components of this family are implicated in diseases like cancer and type 2 diabetes.

Wnt Signaling Modulators



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Figure 1 Chemical structure of Myricetin

Name	ID
Alsterpallone	A422785 , A274619
Bisdemethoxycurcumin	B117979 , B131602
Chlorophyllin sodium copper salt	C420584 , C103352
KY-02111	K420633 , K129803
Myricetin	M111175 , M111176 , M407976
Neuromedin U, rat	N353355

Tankyrase Inhibitors

Name	ID	Name	ID
JW55	J425347 , J304324	XAV-939	X1371719 , X125899 , X408951

Tankyrase, a member of the PARP family, contains ankyrin repeats, an oligomerization domain, and a PARP domain. It interacts with Axin, a component of the β -catenin degradation complex, promoting its degradation via the ubiquitin-proteasome pathway. Inhibition of Tankyrase stabilizes Axin, leading to β -catenin degradation and preventing activation of downstream processes like differentiation and epithelial-mesenchymal transition.

β-Catenin Inhibitors

β-catenin is a protein that regulates cell adhesion, differentiation, and development. As a component of the cadherin complex, it amplifies signal transduction and activates gene transcription in the Wnt signaling pathway. By binding to transcription factors, β-catenin promotes regional development during early embryogenesis. It also plays a role in maintaining stem cell pluripotency and differentiation. During later development, it facilitates epithelial-mesenchymal transition.

Name	ID
3 - Aminobenzamide	D124561
Bryostatin 1	B274637
Esculetin	D423160 、 D114065 、 D118867
Isorhamnetin	I424169 、 I109591 、 I109592
Sulindac	S125148 、 S408587
Sulindac Sulfide	S649952 、 S656068 、 S160989
Sulindac Sulfone	S347766
S,S-(+)-Tetrandrine	T107322
Triptolide	T107399 、 T107400 、 T423793
Troglitazone	T427185 、 T126362

PORCN Inhibitors

PORCN, a member of the membrane-bound O-acyltransferase (MBOAT) family, regulates the Wnt signaling pathway. The palmitoylation reaction mediated by PORCN is crucial for the release of Wnt from the Golgi to the cell surface and its binding to the Frizzled receptor. In the absence of PORCN, Wnt ligands are not secreted, and embryos fail gastrulation. PORCN is essential for embryonic development, but its inhibition can also limit Wnt-driven β-catenin signaling and other proteins involved in the progression of diseases like cancer.




Figure 2 Chemical structure of IWP-2

Name	ID
C59	W407881 、 W125232
IWP-2	I425479 、 I1371683 、 I126927
LGK-974	L409002 、 L340659

Aladdin: <https://www.aladdinsci.com/>