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## Notch-Out for Breast Cancer Therapies

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### Highlights

- Brief overview of the canonical Notch signaling pathway
- Notch deregulation in disease
- Notch signaling involvement in breast cancer
- Notch pathway targeting in breast cancer as a potential therapy

### Abstract

Notch signalling is an evolutionarily highly conserved pathway that plays a crucial role during embryonic development and in tissue homeostasis maintenance during adult life. Abnormal Notch signalling has been implicated in several human genetic disorders and in multiple facets of cancer biology, including stem cell renewal, cancer cell proliferation, tumor angiogenesis and metastasis. Hence, Notch signalling has gained increasing attention as a potential therapeutic target for many disorders.  $\gamma$ -secretase inhibitors (GSIs) were the first therapeutics used to inhibit pathological Notch signalling in various diseases, notably in oncology. Although GSIs show antitumor activity in advanced and metastatic cancer, the lack of substrate specificity and associated toxicity constitute significant limitations to their

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