



A short Review of Human Epidermal Growth Factor Receptor 2

Xuying Zeng*

Department of Immunology, Tongji Medical College, Huazho University of Science and Technology, Wuhan

Abstract

*Corresponding author:

Received:

Published:

Citation:

Copyright:

Revised:

Editor assigned:
Reviewed:

Fluorescence in situ hybridization (FISH): FISH is a molecular technique used to detect HER2 gene amplification in tumor samples. By labeling specific DNA sequences, researchers can identify and quantify gene amplification, a hallmark of HER2-positive cancers [4, 5]. Preclinical studies often involve the use of animal models, such as mice with HER2-driven tumor xenografts. These models allow researchers to evaluate the efficacy of HER2-targeted therapies and gain insights into tumor biology.

Molecular biology techniques: Techniques like polymerase chain reaction (PCR) and RNA sequencing (RNA-seq) are used to analyze gene expression and identify potential therapeutic targets.

approaches that maximize treatment efficacy while minimizing side effects for patients with HER2-negative tumors. Research has shed light on the mechanisms of resistance to HER2-targeted therapies, revealing challenges in the long-term management of HER2-positive cancers. Understanding these mechanisms is vital for developing strategies to overcome treatment resistance and improve patient outcomes.

Identification of natural MHC class II presented phosphopeptides and tumor-

Structural and molecular understanding:

Structural and molecular studies have provided detailed insights into the architecture of the HER2 receptor and its interactions with therapeutic agents. This knowledge has facilitated the design of new HER2 inhibitors and deepened our understanding of the complex signaling pathways involved. In essence, the exploration of HER2 has not only revolutionized the treatment landscape for HER2-positive cancers but has also enriched our knowledge of cancer biology and the intricacies of targeted therapy. As research in this field continues to evolve, it holds the promise of further refining treatments, discovering novel therapeutic targets, and ultimately enhancing the lives of patients affected by HER2-driven malignancies. The journey from HER2's discovery to the development of precision therapies underscores the remarkable progress achieved in the realm of cancer research and treatment.

Acknowledgment

None

Conflict of Interest

None

References