ATAGENIX LABORATORIES

Catalog Number:ATMP00482HU

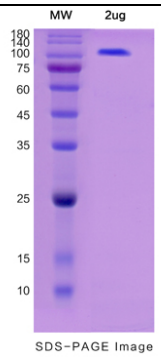
Recombinant Human ERBB2 protein ,C- His Tag

Product Details

Summary

English name	Recombinant Human ERBB2 protein ,C- His Tag
Purity	>90% as determined by SDS-PAGE
Endotoxin level	<1.0 EU per μg of the protein as determined by the LAL method.
Construction	A DNA sequence encoding the human ERBB2(Met1-Thr652) was fused with the C-terminal His Tag
Accession #	P04626
Host	Mammalian cells
Species	Homo sapiens (Human)
Predicted Molecular Mass	71.72kDa
Formulation	Supplied as solution form in PBS pH 7.5 or lyophilized from PBS pH 7.5.
Shipping	In general, proteins are provided as lyophilized powder/frozen liquid. They are shipped out with dry ice/blue ice unless customers require otherwise.
Stability &Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 °C for one week . Store at -20 to -80 °C for twelve months from the date of receipt.
Reconstitution	Reconstitute in sterile water for a stock solution.A copy of datasheet will be provided with the products, please refer to it for details.

SDS-PAGE image



SDS-PAGE Image

Background

Background	Human Epidermal growth factor Receptor 2 (HER2) is also called ERBB2, HER-2, HER-2 /neu, NEU, NGL,TKR1 and c-erb B2,and is a protein giving higher

aggressiveness in breast cancers. It is a member of the ErbB protein family, more commonly known as the epidermal growth factor receptor family. HER2 is a cell membrane surface-bound receptor tyrosine kinase and is normally involved in the signal transduction pathways leading to cell growth and differentiation. HER2 is thought to be an orphan receptor, with none of the EGF family of ligands able to activate it. Approximately 30% of breast cancers have an amplification of the HER2 gene or overexpression of its protein product. Overexpression of this receptor in breast cancer is associated with increased disease recurrence and worse prognosis. HER2 appears to play roles in development, cancer, communication at the neuromuscular junction and regulation of cell growth and differentiation .

Alternative Names HER-2,HER-2/neu,HER2,MLN 19,MLN19,NEU,NGL,TKR1

References Gülten, Yilmaz, Demirkan (2020) Comparing human epidermal growth factor receptor 2 amplification and expression using immunohistochemistry and silver in situ hybridisation in gastric carcinoma and lymph node metastasis Oncology letters 20(2) 1897-1905

Frontier progress

Detecting the amplification and expression of human epidermal growth factor receptor (HER2) is important for planning trastuzumab treatment for patients with gastric carcinoma. The present study aimed to analyse HER2 amplification and expression in primary gastric adenocarcinoma tumours and metastatic lymph nodes using microarray methods, and to assess the potential contribution of these methods to treatment planning. In total, 60 patients with lymph node metastasis were included in the present study. Microarray blocks were obtained from the tissue blocks of primary tumours and metastatic lymph nodes. HER2 expression and amplification were investigated using immunohistochemical and silver in situ hybridisation (SISH) methods, respectively. Following immunohistochemical evaluation of HER2 in primary tumours, the sensitivity and specificity of the microarray method relative to the single block method were 69 and 100%, respectively. For HER2 detection in microarray block sections from primary tumours, the sensitivity and specificity of the SISH method relative to immunohistochemistry were 56 and 100%, respectively. When using SISH in microarray blocked sections, there was a high degree of concordance (98% concordance rate) between HER2 amplification in the primary tumour and the metastatic lymph node. Furthermore, the sensitivity and specificity of metastatic lymph node results relative to those of the primary tumour were 100 and 98%, respectively. Overall, the single block method was more reliable compared with the microarray method for planning treatment. When microarray blocking was used, a large number of samples must be tested to ensure reliable results. The immunohistochemical method is recommended as the first step as SISH alone increases the risk of false-negative results.

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Assessing HER2 amplification for treatment planning would be beneficial for primary tumours, as well as metastatic lymph nodes.