# **Anti-HER2 / ErbB2 Antibody [PD00-53]**

### **IRS034**



Product Type: Recombinant Rabbit monoclonal IgG, primary antibodies

Species reactivity: Human
Applications: mIHC

Molecular Wt: Predicted band size: 138 kDa

Clone number: PD00-53

**Description:** HER-2 (also called HER-2/neu, c-erbB2, ERBB2 or neu) is a transmembrane receptor

tyrosine kinase. HER-2 is a proto-oncogene, i.e. its activation causes malignant transformation and increases the malignant potential (cell proliferation, invasiveness etc.) of the cells. Amplification of HER-2 gene invariably leads to over-expression of its protein product. The magnitude of over- expression is usually 10-100 folds or even more. Overexpressed HER-2 protein disturbs the HER-receptor family signalling networks, i.e. signalling mediated via EGFR receptor, HER-3 and HER-4. In tumours, HER-2 is overexpressed in 15-25% of primary breast cancers. Metastases usually have the same amplification status as the primary tumours. HER-2 amplification and over-expression are typical features of hormone receptor negative, rapidly growing histologic grade 2-3 tumours. Of the histologic types, Paget's disease is almost invariably HER-2 positive, whereas only a small minority of lobular and tubular carcinomas shows HER-2 amplification. HER-2 amplification and over-expression can also be found in intestinal type gastric and gastroesophageal carcinomas, ovarian carcinomas, high grade endometrial carcinomas and some salivary duct tumours. Low-level copy number increases have been found also in rare cases of lung tumours. Because of its central importance in breast cancer therapy selection, standardization of HER-2 IHC assays and slide interpretation are of outmost clinical and

economical importance.

Immunogen: Recombinant protein within Human ErbB2/ HER2 aa 500-650.

Positive control: Human ovarian cancer tissue.

Subcellular location: Cell membrane, Nucleus, Cytoplasm.

Database links: SwissProt: P04626 Human

Recommended Dilutions:

mI HC 1:100

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw

cycles.

**Purity:** Protein A affinity purified.

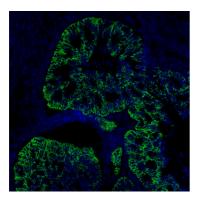
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#### **Images**



**Fig1:** mIHC analysis of human ovarian cancer tissue (Formalin/PFA-fixed paraffin-embedded sections) with Rabbit anti-HER2 / ErbB2 antibody (IRS034) at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95  $^{\circ}$ C. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

### **Background References**

- 1. Ellis CM, Dyson MJ, Stephenson TJ, Maltby EL. HER2 amplification status in breast cancer: a comparison between immunohistochemical staining and fluorescence in situ hybridisation using manual and automated quantitative image analysis scoring techniques. J Clin Pathol. 2005 Jul;58(7):710-4.
- 2. Gancberg D, Jarvinen T, di Leo A, Rouas G, Cardoso F, Paesmans M, Verhest A, Piccart MJ, Isola J, Larsimont D. Evaluation of HER-2/NEU protein expression in breast cancer by immunohistochemistry: an interlaboratory study assessing the reproducibility of HER-2/NEU testing. Breast Cancer Res Treat. 2002 Jul;74(2):113-20.