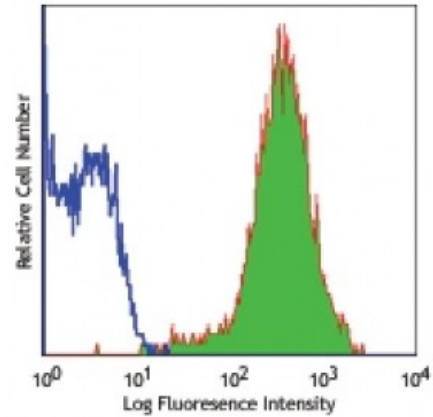


**Alexa Fluor® 647 anti-human CD340 (erbB2/HER-2)**

**Catalog # / Size:** 2222060 / 100 tests  
**Clone:** 24D2  
**Isotype:** Mouse IgG1, κ  
**Immunogen:** NIH-3T3 transfected with human HER-2  
**Reactivity:** Human  
**Preparation:** The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 647 under optimal conditions.  
**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).  
**Concentration:** Lot-specific

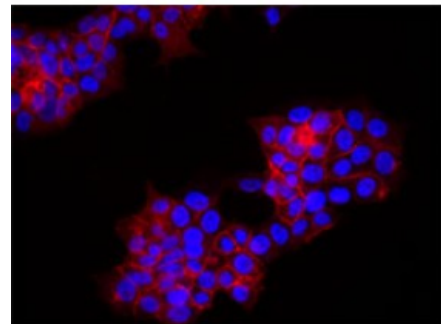


Human breast cancer cell line (MCF-7) stained with 24D2 Alexa Fluor® 647

**Applications:**

**Applications:** Immunofluorescence  
**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

\* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm.



BT474 breast cancer cell line was stained with 2 microg/mL anti-human CD340/Her-2 Alexa Fluor® 647 and nuclear counterstained with DAPI. Images were acquired with a TE300 fluorescence microscope with a 20x objective. Data provided by: Er Liu and Joh

**Application References:** 1. Bühring HJ, *et al.* 1995. *Blood* 86:1916.

**Description:** CD340 is also known as HER2/erbB2, tyrosine kinase cell surface receptor HER2, oncogene ERBB2, and oncogene NGL, neuroblastoma- or glioblastoma-derived. It is a member of the epidermal growth factor receptor family of cell membrane tyrosine kinases containing a single transmembrane domain and has an approximate molecular weight of 185 kD. CD340 contains three furin repeats and two cheY homologous receiver domains in the extracellular region (ECR). The HER2/erbB2 protein is expressed on many tumor cells, including some breast cancers, lung adenocarcinoma, gastric cancer, ovarian cancer, glioblastoma, some c-ALL blasts and bone marrow mesenchymal stem cells. Although the erbB2/HER2 protein contains no ligand binding domain, this protein interacts with other EGF

receptor family members to form a heterodimer, stabilize ligand binding, and enhance kinase-mediated downstream signaling. CD340 has been shown to be involved in embryonic development and cancer progression; this protein is amplified in adenocarcinoma of the lung, some breast cancers, glioblastoma, gastric cancer, and ovarian carcinoma, where it functions as an oncogene. Overexpression of erbB2 in breast cancers has been shown to confer Taxol resistance and is a therapeutic target in a number of human cancers. The erbB2/HER-2 protein has been shown to interact with a large number of proteins, including SHC1, EGF receptor, neuroregulin 1, c-Src, integrin  $\beta$ 4, Grb2, Grb7, SOS1, caveolin 1, JAK2, PAK1, FAK, and  $\beta$ -catenin, among others. CD340 is extensively modified by tyrosine phosphorylation on multiple residues (Y1023, Y1139, Y1196, Y1221, Y1222, Y1248).

**Antigen  
References:**

1. Akiyama T, *et al.* 1986. *Science* 232:1644.
2. Bargmann CI, *et al.* 1986. *Nature* 319:226.
3. Pegram MD, *et al.* 1997. *Oncogene* 15:537.
4. Slamon DJ, *et al.* 1989. *Science*