

Alexa Fluor® 647 anti-CD340 (ErbB2/HER-2) Antibody

Catalog# / Size	639955 / 25 µg 639956 / 100 µg
Clone	W22266D
Regulatory Status	RUO
Other Names	Receptor tyrosine-protein kinase ErbB-2 (ERBB2), human epidermal growth factor receptor 2 (HER2), metastatic lymph node gene 19 protein (MLN19), Proto-oncogene Neu, p185(erbB2), cluster of differentiation 340 (CD340), NGL, herstatin
Isotype	Rat IgG2a, κ
Description	CD340, also commonly known as HER-2 or ErbB2, is a member of the epidermal growth factor receptor family of cell membrane tyrosine kinases containing a single transmembrane domain. CD340 contains three furin repeats and two CheY homologous receiver domains in the extracellular region. Although CD340 itself contains no ligand-binding domain, it 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 lung adenocarcinoma, some breast cancers, glioblastoma, gastric cancer, and ovarian carcinoma, where it functions as an oncogene. CD340 is a therapeutic target in several human cancers and it has been shown that overexpression in breast cancers confers Taxol resistance.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Recombinant fragment of the intracellular domain of human CD340 (ErbB2/HER-2)
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	IHC-P - Quality tested ICC, ICFC - Verified
Recommended Usage	Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration range of 1.0 - 10.0 µg/mL is suggested. For immunocytochemistry, a concentration range of 1.0 - 10.0 µg/mL is recommended. For flow cytometric staining, the suggested use of this reagent is ≤ 0.25 µg per million cells in 100 µL volume. 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 633 nm / 635 nm. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Red Laser (633 nm)
Additional Product Notes	For use in intracellular flow cytometry (ICFC), it is recommended to fix/permeabilize with Cyto-Fast™ Fix/Perm Buffer Set (Cat. No. 426803). Fixation/permeabilization with True-Phos™ Perm Buffer (Cat. No. 425401) or True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401) is not recommended. For use in immunohistochemistry on formalin-fixed paraffin-embedded tissue (IHC-P), it is recommended to perform antigen retrieval using either Citrate Buffer, 10X (Cat. No. 420902) or Tris-EDTA pH 9.0 Antigen

Retrieval Buffer (10X) (Cat. No. 422704).

For use in immunocytochemistry (ICC), it is recommended to fix/permeabilize with any of the following:
-Fixation buffer (Cat. No. 420801) with 0.5 % Triton X-100
-Fixation buffer (Cat. No. 420801) with 100% ice-cold methanol
Fixation/permeabilization with 100% ice-cold methanol only is not recommended.

RRID AB_3720625 (BioLegend Cat. No. 639955)
AB_3720625 (BioLegend Cat. No. 639956)

Antigen Details

Structure	CD340 is a 1255 amino acid protein with a predicted molecular weight of 137.9 kD. It is a glycosylated receptor-like transmembrane protein; due to glycosylation, the observed molecular weight by Western Blot is closer to 175-185 kD.
Distribution	Cellular membrane and also present in internalized vesicles
Function	Receptor, transcriptional regulator
Interaction	Homodimerizes Heterodimerizes with EGFR, ErbB3, ErbB4, PIK3C2B, KPNB1, RANBP2, EEA1, CRM1, CLTC, MUC1, PTK6, RPA194, ACTB, PRKCABP, SRC, MYOC, CPNE3, SORL1, SH3BGR1
Ligand/Receptor	Heterodimerizes with other ERBB family members upon ligand binding, but does not directly bind ligand
Cell Type	Leukemia
Biology Area	Cell Biology, Immunology, Synaptic Biology
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	1. Akiyama T, <i>et al.</i> 1986. <i>Science</i> . 232:1644-6. 2. Bargmann CI, <i>et al.</i> 1986. <i>Nature</i> . 319:226-30. 3. Pegram MD, <i>et al.</i> 1997. <i>Oncogene</i> . 15:537-47. 4. Slamon DJ, <i>et al.</i> 1989. <i>Science</i> . 244:707-12. 5. Leone F, <i>et al.</i> 2003. <i>J Leukoc Biol</i> . 74:593-601.

Gene ID [2064](#)

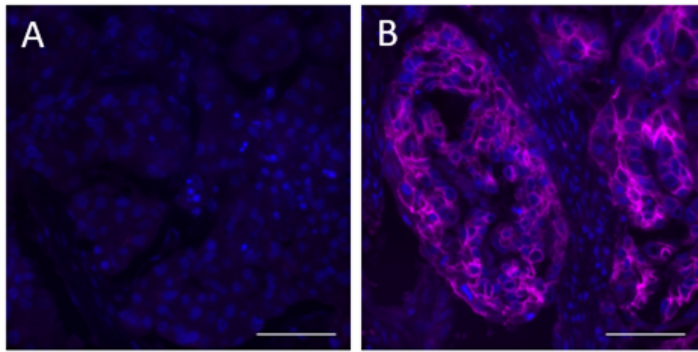
Related Protocols

- [True-Nuclear™ Transcription Factor Staining Protocol for 5mL Tubes](#)
- [Immunocytochemistry Staining for Methanol Fixed Cells](#)
- [Immunocytochemistry Staining Protocol](#)
- [Intracellular Staining With True-Phos™ Perm Buffer in Cell Suspensions Protocol](#)
- [Intracellular Flow Cytometry Staining Protocol](#)
- [Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

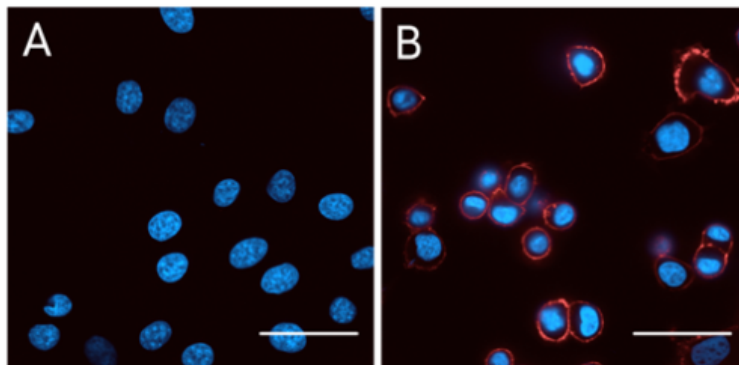
Other Formats

Purified anti-CD340 (ErbB2/HER-2), Alexa Fluor® 647 anti-CD340 (ErbB2/HER-2), PE anti-CD340 (ErbB2/HER-2), Alexa Fluor® 488 anti-CD340 (ErbB2/HER-2)

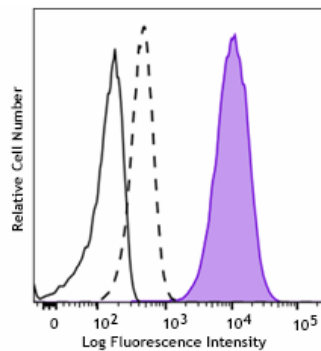
Product Data



IHC staining with Alexa Fluor® 647 anti-CD340 (ErbB2/HER-2) on formalin-fixed paraffin-embedded human breast cancer tissue. Following antigen retrieval using 1X Tris-EDTA pH 9.0 Antigen Retrieval Buffer (Cat. No. 422704), the tissue was incubated without (panel A) and with (panel B) Alexa Fluor® 647 anti-CD340 (ErbB2/HER-2). Nuclei were counterstained with DAPI (Cat. No. 422801). Images were captured using a Revvity Operetta CLStrade; High Content Analysis System with a 40X objective and merged. Scale bar: 50 μm



HeLa cells (negative cell line, panel A) and SK-BR-3 cells (positive cell line, panel B) were fixed with 4% PFA Fixation Buffer (Cat. No. 420801) for 10 minutes, permeabilized with 0.5% Triton X-100 for 10 minutes, and blocked with 5% FBS for 1 hour at room temperature. Cells were then stained with Alexa Fluor® 647 anti-CD340 (ErbB2/HER-2) (clone W22266D). Nuclei were counterstained with DAPI (Cat. No. 422801). The images were captured on a Revvity Operetta CLS™ High Content Analysis System with a 63X objective and merged. Scale bar: 50 μm



SK-BR-3 cells (positive cell line, filled histogram) and HeLa cells (negative cell line, open histogram) were fixed and permeabilized using Cyto-Fast™ Fix/Perm Buffer Set (Cat. No. 426803) and intracellularly stained with Alexa Fluor® 647 anti-CD340 (ErbB2/HER-2) (clone W22266D), or Alexa Fluor® 647 Rat IgG2a, κ Isotype Control (Cat. No. 400526) (dashed histogram).

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