

Datasheet for 400-001-GY3**Recombinant Anti-HER2 Fab Antibody****Overview**

Description:	Humanized Recombinant Anti-Human HER2 Fab fragment Antibody - 400-001-GY3
Item No.:	400-001-GY3
Size:	50 µg
Applications:	ELISA, FC, WB
Reactivity:	Human
Expressed in:	E. coli

Product Details

Background:	HER2 (human epidermal growth factor receptor 2) is a member of the epidermal growth factor receptor (HER/EGFR/ERBB) family. It is also called ERBB2, CD340 or proto-oncogene Neu. The protein is a receptor tyrosine kinase located on the plasma membrane of cells. Activation of the tyrosine kinase promotes cell proliferation and suppresses apoptosis. HER2 can dimerize with any other member of the ErbB family, which results in auto phosphorylation of tyrosine residues and activation of signal pathways. HER2 is over expressed in a significant proportion of cancer patients, resulting in an increased disease recurrence and poor prognosis. Therefore an early diagnosis of the HER2 status of the tumors is necessary to decide the appropriate treatment. Besides in breast cancer HER2 is over expressed in variety of different tumors. The over expression of HER2 makes it a target for immunotherapy of certain tumor patients. The antibody Trastuzumab (Herceptin) which recognizes HER2 was approved for the treatment of HER2 positive breast cancer patients in 1998. The original approval was for treatment of HER2 positive metastatic breast tumors. Later studies have shown that Herceptin is also beneficial for early stage HER2 positive tumor patients and it is approved as an adjuvant treatment. Additionally the antibody is now approved also for other HER2 positive tumors (metastatic gastric adenocarcinoma). This antibody is made from a humanized Fab fragment making it specific, efficient, and effective. Humanized Recombinant Anti-HER2 Fab fragment Antibody is useful for researchers interested in Cancer research.
Synonyms:	CD340, cluster of differentiation 340, ERBB2 (human), human epidermal growth factor receptor 2, HER2/neu, recombinant Monoclonal HER2, RabMAb HER2, Trastuzumab, Herceptin, Humanized Antibody, Recombinant Anti-HER2 Fab antibody, HER-2, Receptor tyrosine-protein kinase erbB-2, Metastatic lymph node gene 19 protein, Proto-oncogene Neu, p185erbB2
Expressed in:	E. coli
Clonality:	Recombinant Monoclonal

Clone ID:	Abz518
Format:	IgG Fab

Target Details

Gene Name:	ERBB2
Reactivity:	Human
Immunogen Type:	Recombinant Protein
Purity/Specificity:	Humanized Recombinant HER2 Fab fragment was expressed in E. coli cells. The purity was estimated to be >90% by SDS-PAGE analysis.
Relevant Links:	• 400-001-GY3 SDS • UniProtKB - P04626 • NCBI - NP_001005862.1 • GenelD - 2064

Application Details

Tested Applications:	ELISA, FC, WB
Application Note:	Humanized Recombinant Anti-HER2 Fab fragment Antibody has been tested for use in Flow Cytometry, Western Blot, and ELISA. This antibody recognizes structured HER2 and will work in western blot when the protein has not been denatured with DTT or bMe. Although not tested, this antibody could be useful in IHC and in in-vivo and other cellular assays. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 to 1:100,000
FC:	1:100
WB:	1:2,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.59 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative: 0.01% (w/v) Sodium Azide

Stabilizer: 30% Glycerol

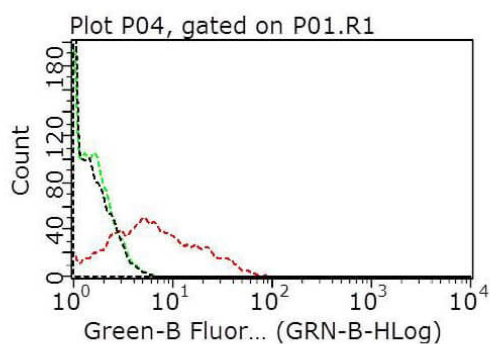
Shipping & Handling

Shipping Condition: Wet Ice

Storage Condition: Store vial at -20° C. Dilute only prior to immediate use.

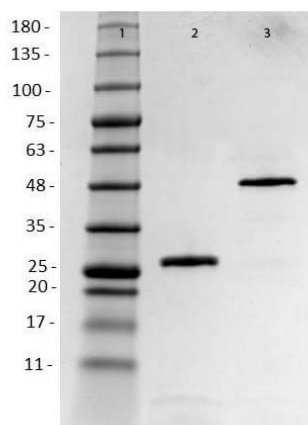
Expiration: Expiration date is six (6) months from date of receipt.

Images



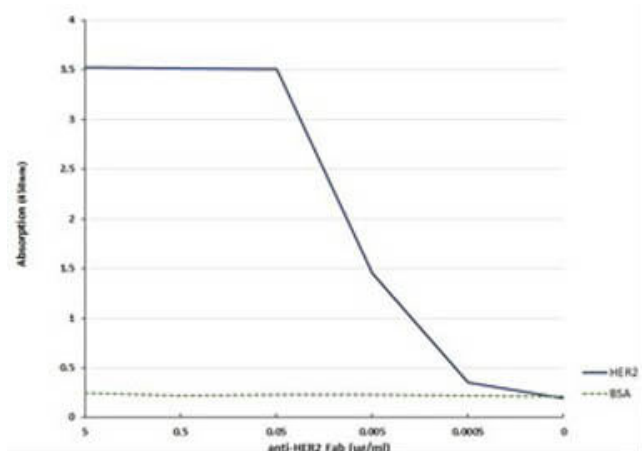
Flow Cytometry

Flow Cytometry of Humanized Recombinant Anti-human HER2 Fab fragment Antibody. Primary Antibody: Recombinant Anti-HER2 Fab fragment (red line) recognizes HER2 on SK-OV-3 cells while using Anti-human kappa FITC secondary antibody at 0.2 µL with a 56.8% positive cells. Controls used: (black line) no primary antibody, no secondary antibody, 0.6%; (green line) no primary antibody, Anti-human kappa FITC secondary antibody at 0.2 µL, 1.0%.



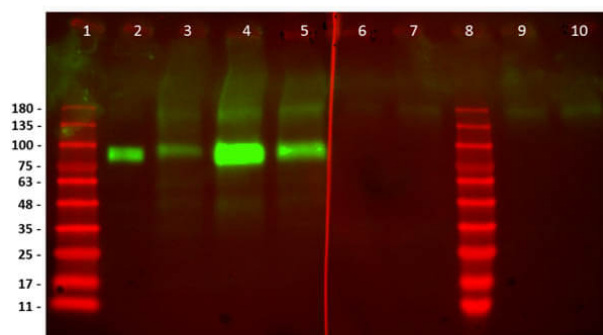
SDS-PAGE

SDS-PAGE of Humanized Recombinant Anti-human HER2 Fab fragment Antibody. Lane 1: Molecular Weight Ladder. Lane 2: reduced recombinant HER2 Fab fragment. Lane 3: non-reduced recombinant HER2 Fab fragment.



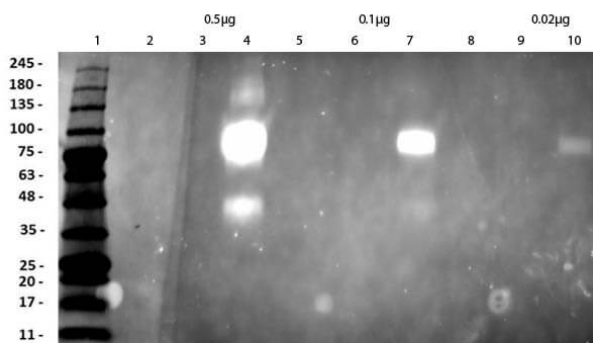
ELISA

ELISA results show the sensitivity of Humanized Recombinant Anti-human HER2 Fab fragment Antibody tested against purified HER2 protein. Each well was coated in duplicate with 1.0 µg of HER2. The starting dilution of antibody was 5.0 µg/ml.



Western Blot

Western Blot of Humanized Recombinant Anti-human HER2 Fab fragment Antibody. Lane 1 and 8: Molecular Weight Marker. Lane 2 and 6: 0.02µg HER2. Lane 3 and 7: 20µg non-spiked SKOV-3 lysate. Lane 4 and 9: 20µg SKOV-3 lysate spiked with 0.05µg HER2. Lane 5 and 10: 20µg SKOV-3 lysate spiked with 0.02µg HER2. Primary Antibody: Anti-HER2 Fab incubated with lanes 1-5 only. Secondary Antibody: Anti-F(ab)'2 HRP conjugate at 1:5000. Anti-HER2 Fab antibody observed in native HER2 and spiked HER2 in SKOV-3 cell lysates.



Western Blot

Western Blot of Humanized Recombinant Anti-human HER2 Fab fragment Antibody. Lane 1: Molecular Weight Ladder. Lane 2, 5, and 8: Empty. Lane 3, 6, and 9: HER2 reduced. Lane 4, 7, 10: HER2 non-reduced. Protein Load: Lane 3-4: 0.5µg. Lane 6-7: 0.1µg. Lane 9-10: 0.02µg. Primary Antibody: anti-HER2 Fab at 1:2000 for 2 hours at 4° C. Secondary Antibody: Anti-human kappa FITC conjugate at 1:1000 for 2 hours at 4° C. Exposure time 60s.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.