

Anti-Fluorescein [4-4-20 (enhanced)] Standard Size Ab00102-1.65

Antibody with mutations to prevent heavy-chain homodimerization, leading to a "one-armed" half-antibody. This antibody can be recognised by anti-mIgG1 heavy chain secondary antibody, but maintains monovalent antigen binding.

This is a "half-antibody", based on a mouse IgG1 with mutations to prevent heterodimerization of the heavy chains.

Isotype and Format: Mouse IgG1 Half-antibody, Half-mAb, Kappa

Clone Number: 4-4-20 (enhanced)

Alternative Name(s) of Target: FL; FII; FITC; Fluorescein isothiocyanate; fluorescein isothiocyanate, isomer 1; Fluorescyl; Resorcinolphthalein; C.I. 45350; solvent yellow 94; D & C yellow no. 7; Angiofluor; Japan yellow 201; Soap yellow; 3',6'-dihydroxyspiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one

UniProt Accession Number of Target Protein:

Published Application(s): in vivo, negative control

Published Species Reactivity: Species independent

Immunogen: The original antibody was generated by immunizing BALB/c mice with fluorescein I-keyhole limpet hemocyanin (FII-KLH).

Specificity: This antibody is specific for fluorescein I.

Application Notes: This antibody, a humanized, enhanced scFv of the original mouse IgG2a antibody, was constructed by grafting the CDRs of the original antibody onto the humanized 4D5 anti-HER2 antibody framework, and subsequently enhancing it with respect to folding and stability via randomization in the form of DNA shuffling, as well as oligonucleotides encoding mutations at defined positions (Jung et al., 1999; PMID: 10556036). The original antibody was tested against FII-BSA. The enhanced antibody fragment was tested against FITC-BSA. This antibody can be used as an isotype control in both *in vitro* and *in vivo* applications. This antibody is not conjugated to fluorescein.

Antibody First Published in: Jung et al., Selection for improved protein stability by phage display. J Mol Biol. 1999 Nov 19;294(1):163-80. [PMID:10556036](#)

Note on publication: The original publication explores the selection of improved protein stability using phage display, generating mutants of the single-chain Fv fragment variant of clone 4-4-20 and comparing selection strategies under different conditions, ultimately yielding a significantly more stable mutant with

20-fold-enhanced binding properties.

Product Form

Size: 100 µg Purified antibody.

Purification: Protein A affinity purified

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.