

Datasheet: TZC042B

Description:	HUMAN IgG1-FcSPYCATCHER3:Biotin
Name:	HUMAN IgG1-FcSPYCATCHER3
Format:	Catcher-Biotin
Product Type:	Recombinant Protein
Quantity:	0.5 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Immunoassay	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species	Protein/peptide tag
Product Form	Purified recombinant protein conjugated to Biotin - liquid
Preparation	Recombinant protein expressed in mammalian cell line and purified by affinity chromatography
Source	HKB-11
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.0095% MIT
Approx. Protein Concentrations	80 µM (6.2 mg/ml)

Product Information **Human IgG1-FcSpyCatcher3** (hlgG1-FcSpyC3) contains a SpyCatcher3 ([Keeble et al. 2019](#)) fused to the hinge region, CH2 and CH3 of human IgG1 ([Hentrich et al. 2020](#)), resulting in a 77.2 kDa protein for the disulfide-bridged dimer. Each SpyCatcher3 subunit can form a stable covalent isopeptide bond with a second protein that includes a SpyTag.

The reaction occurs spontaneously on mixing, is rapid, irreversible, high-yielding and shows good specificity. The reaction is robust at pH 5 to 8, at temperatures from +4°C to +37°C, in various buffer conditions (Ca²⁺/Mg²⁺ not needed) and in the presence of detergents. The reaction also occurs inside cells (*in vivo*). Since the speed of the coupling reaction is concentration dependent, it is recommended to use hIgG1-FcCatcher3 undiluted.

Human IgG1-FcSpyCatcher3 is compatible with Bio-Rad's recombinant HuCAL antibodies with a SpyTag2 at the C-terminus of the heavy chain. It is available purified or conjugated to biotin.

[Download FcSpyCatcher coupling protocol](#)

[View all available Catchers](#)

Protein Molecular Weight	Predicted molecular weight of the purified Catcher is 77166 Da The molecular weight specified excludes conjugation and will vary upon conjugation depending on the molecular weight of the label
Purity	≥90% determined by SDS-PAGE under reducing conditions and visualized by coomassie blue staining
Instructions For Use	View FcSpyCatcher Coupling Protocol
References	<ol style="list-style-type: none">1. Keeble, A.H. <i>et al.</i> (2019) Approaching infinite affinity through engineering of peptide-protein interaction. Proc Natl Acad Sci U S A. 10: 116 (52): 26523-33.2. Hentrich, C. <i>et al.</i> (2021) Periplasmic expression of SpyTagged antibody fragments enables rapid modular antibody assembly. Cell Chem Biol. 28 (6): 813-824.e6.
Storage	Store at -20°C only. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the protein. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch
Acknowledgements	This product and/or its use is covered by claims of U.S. patents, and/or pending U.S. and non-U.S. patent applications owned by or under license to Bio-Rad Laboratories, Inc. See bio-rad.com/en-us/trademarks for details.
Health And Safety Information	Material Safety Datasheet documentation #20480 available at: https://www.bio-rad-antibodies.com/SDS/TZC042B
Licensed Use	For <i>in vitro</i> research purposes. Any re-sale in any form or any other commercial application needs a written agreement with Bio-Rad.
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

[SpyTag3 PEPTIDE \(BLP086\)](#)

[ANTI SpyCatcher \(HCA379\)](#)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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