

Datasheet: TZC009

**BATCH NUMBER 167042**

<b>Description:</b>	HUMAN IgG1-FcSpyCatcher3
<b>Name:</b>	HUMAN IgG1-FcSPYCATCHER3
<b>Format:</b>	Catcher
<b>Product Type:</b>	Recombinant Protein
<b>Quantity:</b>	1 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](http://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.

<b>Target Species</b>	Protein/peptide tag
<b>Product Form</b>	FcSpyCatcher3 purified recombinant protein, fused to the hinge region, CH2, and CH3 of human IgG1 - liquid
<b>Preparation</b>	Recombinant protein expressed in mammalian cell line and purified by affinity chromatography
<b>Source</b>	HKB-11
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.0095% MIT
<b>Approx. Protein Concentrations</b>	80 µM (6.2 mg/ml)
<b>Product Information</b>	<b>Human IgG1-FcSpyCatcher3</b> (hlgG1-FcSpyC3) contains a SpyCatcher3 ( <a href="#">Keeble et al. 2019</a> ) fused to the hinge region, CH2 and CH3 of human IgG1 ( <a href="#">Hentrich et al. 2020</a> ),

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 (Ca<sup>2+</sup>/Mg<sup>2+</sup> 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 hlgG1-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 ([TZC009](#)) or conjugated to biotin ([TZC009B](#)).

[Download FcSpyCatcher coupling protocol](#)

[View all available Catchers](#)

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<b>Protein Molecular Weight</b>	Predicted 77166 Da
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<b>Purity</b>	≥90% determined by SDS-PAGE under reducing conditions and visualized by coomassie blue staining
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<b>Instructions For Use</b>	<a href="#">View FcSpyCatcher Coupling Protocol</a>
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<b>References</b>	<ol style="list-style-type: none"><li>1. Keeble, A.H. <i>et al.</i> (2019) Approaching infinite affinity through engineering of peptide-protein interaction. <a href="#">Proc Natl Acad Sci U S A. 10: 116 (52): 26523-33.</a></li><li>2. Hentrich, C. <i>et al.</i> (2021) Periplasmic expression of SpyTagged antibody fragments enables rapid modular antibody assembly. <a href="#">Cell Chem Biol. 28 (6): 813-824.e6.</a></li></ol>
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<b>Storage</b>	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.
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<b>Guarantee</b>	12 months from date of despatch
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<b>Acknowledgements</b>	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 <a href="http://bio-rad.com/en-us/trademarks">bio-rad.com/en-us/trademarks</a> for details.
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20480 available at: <a href="https://www.bio-rad-antibodies.com/SDS/TZC009">https://www.bio-rad-antibodies.com/SDS/TZC009</a> 20480
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<b>Licensed Use</b>	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.
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## Related Products

### Recommended Useful Reagents

[HUMAN IgG1-FcSpyCatcher3:Biotin \(TZC009B\)](#)

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

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