

## Datasheet: HCA147D680

<b>Description:</b>	HUMAN ANTI HUMAN ACTIN BETA:DyLight®680
<b>Specificity:</b>	ACTIN BETA
<b>Other names:</b>	ACTB
<b>Format:</b>	DyLight®680
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	AbD12141
<b>Isotype:</b>	HuCAL Fab bivalent
<b>Quantity:</b>	0.1 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
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting	▪			1/1000 - 1/10000
Functional Assays			▪	

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

Human

### Species Cross Reactivity

Reacts with: Mouse, Rat  
Based on sequence similarity, is expected to react with: Vertebrates, Invertebrates  
**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

### Product Form

A bivalent human recombinant Fab (lambda light chain) selected from the HuCAL® phage display library, expressed in *E. coli*. This Fab fragment is dimerized via a helix-turn-helix

motif. The antibody is tagged with myc-tag (EQKLISEEDL) and a double extended Strep-tag at the C-terminus of the antibody heavy chain. This antibody is supplied conjugated to DyLight 680 - liquid.

<b>Max Ex/Em</b>	<b>Fluorophore</b> Dylight@680	<b>Excitation Max (nm)</b> 692	<b>Emission Max (nm)</b> 712
<b>Preparation</b>	StrepTactin affinity chromatography		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )		
<b>Approx. Protein Concentrations</b>	Ig concentration 1.0 mg/ml		
<b>Immunogen</b>	Purified human beta-actin		
<b>External Database Links</b>	<b>UniProt:</b> <a href="#">P60709</a> <a href="#">Related reagents</a>  <b>Entrez Gene:</b> <a href="#">60</a> ACTB <a href="#">Related reagents</a>		
<b>RRID</b>	AB_10846824		
<b>Specificity</b>	<p><b>Human anti human actin beta antibody, clone AbD12141</b> recognizes the 42 kDa product of the ACTB gene, cytoplasmic actin beta, also known as actin cytoplasmic 1. Actin beta is ubiquitously expressed in all eukaryotic cells, playing a critical role in cell survival, motility and re-modelling.</p> <p>Actin beta is highly conserved throughout evolution, with all vertebrate and invertebrate species reviewed to date bearing a 98% or greater amino acid primary sequence identity to human actin beta. Plant species also exhibit a high degree of primary sequence conservation displaying considerable similarity to animal actin beta. For example, nearly 90% sequence identity is observed between the human ACTB and the model plant species <i>Arabidopsis thaliana</i> (mouse eared cress) ACT1 (<i>Arabidopsis</i>) gene products.</p> <p>Actin beta is a commonly used Western blotting loading control for cell and tissue lysates across many species due to its ubiquitous expression and evolutionary conservation rendering antibodies against this target cross reactive with protein preparations from many different organisms.</p>		
<b>Western Blotting</b>	HCA147D680 is suitable for use as a loading control		
<b>References</b>	1. Walsh, C.A. <i>et al.</i> (2020) The mevalonate precursor enzyme HMGCS1 is a novel marker and key mediator of cancer stem cell enrichment in luminal and basal models of		

breast cancer. [PLoS One. 15 \(7\): e0236187.](#)

2. Lederhofer, J. *et al.* (2018) Development of a Virosomal RSV Vaccine Containing 3D-PHAD<sup>®</sup> Adjuvant: Formulation, Composition, and Long-Term Stability. [Pharm Res. 35 \(9\): 172.](#)

---

**Storage** This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

---

**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](http://bio-rad.com/en-us/trademarks) for details.

DyLight<sup>®</sup> is a trademark of Thermo Fisher Scientific Inc. and its subsidiaries.

---

**Health And Safety Information** Material Safety Datasheet documentation #10040 available at: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

---

**Licensed Use** For in vitro research purposes only, unless otherwise specified in writing by Bio-Rad

---

**Regulatory** For research purposes only

---

**Technical Advice** Recommended protocols and further information about HuCAL recombinant antibody technology can be found in the [HuCAL Antibodies Technical Manual](#)

---

**North & South America** Tel: +1 800 265 7376

Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto:antibody_sales_us@bio-rad.com)

**Worldwide**

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: [antibody\\_sales\\_uk@bio-rad.com](mailto:antibody_sales_uk@bio-rad.com)

**Europe**

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

Email: [antibody\\_sales\\_de@bio-rad.com](mailto:antibody_sales_de@bio-rad.com)

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

'M391623:211015'

**Printed on 06 Jan 2022**

---

© 2022 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)