

## Advantage® 2 PCR Kit

Catalog Nos.	Amount	Lot Number
639206	100 reactions	Specified on product label.
639207	30 reactions	

### Description

This kit allows efficient, accurate, and convenient amplification of DNA templates using long and accurate PCR. The Advantage 2 Polymerase Mix is comprised of Titanium® *Taq* DNA Polymerase (a nuclease-deficient N-terminal deletion of *Taq* DNA polymerase) blended with TaqStart® Antibody to provide automatic hot-start PCR, and a minor amount of a proofreading polymerase. Enough enzyme mix, buffer and dNTPs are supplied for 30 (Cat. No. 639207) or 100 (Cat. No. 639206) PCR reactions of 50 µl each. In addition, an aliquot of calf thymus DNA is provided as a control template for amplifying the bovine pancreatic trypsin inhibitor (BPTI) gene using the Control Primer Mix.

### Package Contents

<u>639207</u> (30 rxns)	<u>639206</u> (100 rxns)	
30 µl	100 µl	50X Advantage 2 Polymerase Mix
200 µl	600 µl	10X Advantage 2 PCR Buffer
200 µl	600 µl	10X Advantage 2 SA PCR Buffer
50 µl	120 µl	50X dNTP Mix (10 mM each)
30 µl	100 µl	Control DNA Template (100 ng/µl)
30 µl	100 µl	Control Primer Mix (10 µM each)
2 x 1.25 ml	4 x 1.25 ml	PCR-Grade Water

### Storage Conditions

- -20°C

### Shelf Life

- 1 year from date of receipt under proper storage conditions.

### Shipping Conditions

- Dry ice (-70°C)

### Product Documents

Documents for our products are available for download at [takarabio.com/manuals](http://takarabio.com/manuals)  
The following documents apply to this product:

- Advantage 2 PCR Enzyme System User Manual (PT3281-1)
- Advantage 2 PCR Kit Protocol-at-a-Glance (PT3281-2)

---

#### Takara Bio USA, Inc.

1290 Terra Bella Avenue, Mountain View, CA 94043, USA  
U.S. Technical Support: [techUS@takarabio.com](mailto:techUS@takarabio.com)

United States/Canada 800.662.2566 (101717)	Asia Pacific +1.650.919.7300	Europe +33.(0)1.3904.6880	Japan +81.(0)77.565.6999
--	---------------------------------	------------------------------	-----------------------------

## Quality Control Data

### Raw Material Quality Control

Purified N-terminal deletion mutant *Taq* polymerase was tested for enzymatic activity and PCR performance. Endonuclease, exonuclease, and DNA contamination assays were also performed.

### PCR Performance

N-terminal deletion mutant *Taq* DNA polymerase was serially diluted and each serial dilution was used in a separate PCR reaction with calf thymus DNA as a template. The optimal dilution per reaction was determined by amplifying a 3.5-kb fragment with minimal background.

### Functional Quality Control

#### Amplification of cDNA fragments using SMARTer® RACE:

Advantage 2 Polymerase Mix was tested by performing 5'- and 3'-rapid amplification of cDNA ends (RACE) using the SMARTer RACE 5'/3' Kit (Cat. Nos. 634858 & 634859). Reactions were performed as described in the User Manual using 50 ng of mouse heart total RNA and 5' or 3' transferrin receptor primers. The expected 2.1-kb and 3.1-kb products were observed on an agarose gel for 5'- and 3'-RACE respectively.

#### Amplification from a genomic DNA template:

Advantage 2 Polymerase Mix was tested in a 50- $\mu$ l PCR reaction using 100 ng of calf thymus genomic DNA as a template and primers specific for the bovine pancreatic trypsin inhibitor (BPTI) gene (0.4  $\mu$ M each). Two reactions were performed: amplification of a 3.5-kb fragment of the BPTI gene using the 10X Advantage 2 PCR Buffer and amplification of a 407-bp fragment in 10X Advantage 2 SA PCR Buffer. Conditions were set at:

1 cycle	95°C, 1 min
30 cycles	95°C, 15 sec
	68°C, 3 min

5  $\mu$ l of each PCR product was run on a 1% TAE/agarose gel to confirm the presence of 3.5-kb and 407-bp bands, respectively, with minimal background.

It is certified that this product meets the above specifications, as reviewed and approved by the Quality Department.

## Advantage® 2 PCR Kit

### CATALOG NO.

639206, 639207

### NOTICE TO PURCHASER:

Our products are to be used for research purposes only. They may not be used for any other purpose, including, but not limited to, use in drugs, in vitro diagnostic purposes, therapeutics, or in humans. Our products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products or to provide a service to third parties without prior written approval of Takara Bio USA, Inc.

Your use of this product is also subject to compliance with the licensing requirements listed below and described on the product's web page at <http://www.takarabio.com>. It is your responsibility to review, understand and adhere to any restrictions imposed by these statements.

### TRADEMARKS:

©2017 Takara Bio Inc. All Rights Reserved.

All trademarks are the property of Takara Bio Inc. or its affiliate(s) in the U.S. and/or other countries or their respective owners. Certain trademarks may not be registered in all jurisdictions.

---

#### Takara Bio USA, Inc.

1290 Terra Bella Avenue, Mountain View, CA 94043, USA

U.S. Technical Support: techUS@takarabio.com

**United States/Canada**

**Asia Pacific**

**Europe**

**Japan**

800.662.2566

+1.650.919.7300

+33.(0)1.3904.6880

+81.(0)77.565.6999

10/17/2017