

# Product Datasheet

## PD-1 Antibody (4F12) [Alexa Fluor® 488] NBP1-04328AF488

Unit Size: 0.1 ml

Store at 4C in the dark.

[www.novusbio.com](http://www.novusbio.com)



[technical@novusbio.com](mailto:technical@novusbio.com)

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:  
[www.novusbio.com/NBP1-04328AF488](http://www.novusbio.com/NBP1-04328AF488)

Updated 10/23/2024 v.20.1

Earn rewards for product  
reviews and publications.

Submit a publication at [www.novusbio.com/publications](http://www.novusbio.com/publications)

Submit a review at [www.novusbio.com/reviews/destination/NBP1-04328AF488](http://www.novusbio.com/reviews/destination/NBP1-04328AF488)



**NBP1-04328AF488**

PD-1 Antibody (4F12) [Alexa Fluor® 488]

Product Information	
Unit Size	0.1 ml
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C in the dark.
Clonality	Monoclonal
Clone	4F12
Preservative	0.05% Sodium Azide
Isotype	IgG2b Kappa
Conjugate	Alexa Fluor 488
Purity	Protein G purified
Buffer	50mM Sodium Borate

Product Description	
Host	Mouse
Gene ID	5133
Gene Symbol	PDCD1
Species	Human, Canine
Reactivity Notes	Use in Canine reported in scientific literature (PMID:34923192) .
Immunogen	Recombinant human PD-1 (21-167aa) purified from E. coli
Notes	Alexa Fluor (R) products are provided under an intellectual property license from Life Technologies Corporation. The purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: (i) in manufacturing; (ii) to provide a service, information, or data in return for payment; (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or <a href="mailto:outlicensing@lifetech.com">outlicensing@lifetech.com</a> . This conjugate is made on demand. Actual recovery may vary from the stated volume of this product. The volume will be greater than or equal to the unit size stated on the datasheet.

Product Application Details	
Applications	Western Blot, ELISA, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Product Image
Recommended Dilutions	Western Blot, Flow Cytometry, ELISA, Immunocytochemistry/ Immunofluorescence, Product Image
Application Notes	Optimal dilution of this antibody should be experimentally determined.



## Images

Product Image: PD-1 Antibody (4F12) [Alexa Fluor® 488] [NBP1-04328AF488] - Vial of Alexa Fluor 488 conjugated antibody. Alexa Fluor 488 is optimally excited at 490 nm by the Blue laser (488 nm) and has an emission maximum of 525 nm.



Alexa Fluor® 488

LASER (nm)	FILTER
Blue (488)	525/50

EXCITATION MAX (nm)	EMISSION MAX (nm)
490	525



### Novus Biologicals USA

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### Bio-Techne Canada

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### Bio-Techne Ltd

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### General Contact Information

www.novusbio.com  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### Products Related to NBP1-04328AF488

---

NBP1-43317AF488	Mouse IgG2b Kappa Light Chain Isotype Control (MG2b) [Alexa Fluor® 488]
NBP1-77276PEP	PD-1 Antibody Blocking Peptide
210-TA-005	TNF-alpha [Unconjugated]
1086-PD-050	PD-1 [Unconjugated]

---

### Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

For more information on our 100% guarantee, please visit [www.novusbio.com/guarantee](http://www.novusbio.com/guarantee)

Earn gift cards/discounts by submitting a review: [www.novusbio.com/reviews/submit/NBP1-04328AF488](http://www.novusbio.com/reviews/submit/NBP1-04328AF488)

Earn gift cards/discounts by submitting a publication using this product:  
[www.novusbio.com/publications](http://www.novusbio.com/publications)

