

# Product Datasheet

## Secreted Alkaline Phosphatase Reporter Assay Kit (Colorimetric) NBP2-25285

Unit Size: 1 Kit

Storage of components varies. See protocol for specific instructions.

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



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

**Publications: 11**

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:  
[www.novusbio.com/NBP2-25285](http://www.novusbio.com/NBP2-25285)

Updated 12/10/2024 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/NBP2-25285](http://www.novusbio.com/reviews/destination/NBP2-25285)



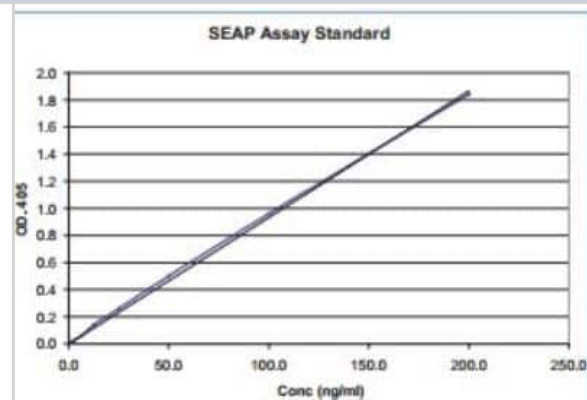
**NBP2-25285****Secreted Alkaline Phosphatase Reporter Assay Kit (Colorimetric)**

<b>Product Information</b>	
<b>Unit Size</b>	1 Kit
<b>Concentration</b>	Concentration is not relevant for this product. Please see the protocols for proper use of this product.
<b>Storage</b>	Storage of components varies. See protocol for specific instructions.
<b>Product Description</b>	
<b>Description</b>	<p>This Kit provides sufficient reagents for 400 quantitative measurements of SEAP protein in 96-well microtiter format.</p> <p>Multiple samples can be analyzed in a low-volume, high through-put experiment.</p> <p>Full analysis complete in under 1 hr.</p> <p>SEAP is secreted into the media so no cell lysis is required for the detection of its enzymatic activity.</p> <p>A secreted indicator function permits multiple kinetics experiments using only one culture through sequential sampling of the medium, and also allows the cells to be used for other purposes, such as RNA extraction, Western blot analysis, and other assays.</p> <p>Heating samples at 65C for 10-30 mins can destroy endogenous alkaline phosphatase but not SEAP.</p> <p>SEAP is stable in serum, allowing it to be used as a reporter assay in vivo. SEAP catalyzes the hydrolysis of pNitrophenyl phosphate (PNPP) producing a yellow product that can be read in a spectrophotometer or ELISA reader at 405 nm.</p>
<b>Specificity/Sensitivity</b>	Use of duplicate wells for the SEAP standard is recommended to obtain accurate results. This kit can be used with supernatant from transfected cells as described or serum as determined by your experimental protocol.
<b>Kit Components</b>	SEAP Standard at 200 ug/mL (10 uL), PNPP Substrate (8 x 5 mg), 10X Sample Dilution Buffer (10 mL), 10X PNPP Buffer (4 mL), 96-well Microplate (4 EA), Microplate Seal (4 EA)
<b>Product Application Details</b>	
<b>Applications</b>	Enzyme Activity
<b>Recommended Dilutions</b>	Enzyme Activity



## Images

Enzyme Activity: Secreted Alkaline Phosphatase Reporter Assay Kit (Colorimetric) [NBP2-25285] - Secreted Alkaline Phosphatase Reporter Assay Kit [NBP2-25285] - Standard curve. A serial dilution of SEAP protein was added to wells of a 96-microtiter plate and the standard curve was generated according to the Kit assay protocol.



## Publications

Pistikou A, Cremers G, Nathalia B et al. Engineering a Scalable and Orthogonal Platform for Synthetic Communication in Mammalian Cells bioRxiv 2023-01-19 [PMID: 37919273] (EnzAct)

Denolly S, Guo H, Martens M et al. Dengue virus NS1 secretion is regulated via importin-subunit  $\alpha 1$  controlling expression of the chaperone GRp78 and targeted by the clinical drug ivermectin mBio 2023-09-13 [PMID: 37702492]

Mark RB and Marc GA Utility of Alternative Promoters for Foreign Gene Expression Using the Baculovirus Expression Vector System Viruses 2022-11-29 [PMID: 36560674]

### Details:

The supernatants of infections with SEAP-producing rBEVs were harvested by centrifugation at 1000× g for 10 min.

Lapierre J, Rodriguez M, Ojha CR, El-Hage N Critical Role of Beclin1 in HIV Tat and Morphine-Induced Inflammation and Calcium Release in Glial Cells from Autophagy Deficient Mouse. J Neuroimmune Pharmacol. 2018-05-11 [PMID: 29752681] (Bacteria)

### Details:

Mice were infected with *S. pneumoniae*.

Fereig RM, Kuroda Y, Terkawi MA et al. Immunization with Toxoplasma gondii peroxiredoxin 1 induces protective immunity against toxoplasmosis in mice. PLoS ONE. 2017-04-27 [PMID: 28448521] (ELISA, Mouse)

Greene CM, Carroll TP, Smith SG et al. TLR-induced inflammation in cystic fibrosis and non-cystic fibrosis airway epithelial cells. J Immunol. 2005-02-01 [PMID: 15661927]

### Details:

Functional Assays: 1. TLR2/NF- $\kappa$ B/SEAP Stably Transfected HEK 293 Cells (IML-102). 2. TLR4/MD-2/NF- $\kappa$ B/SEAP Stably Transfected HEK 293 Cells (IML-104MD2). 3. TLR4/NF- $\kappa$ B/SEAP Stably Transfected HEK 293 Cells (IML-104). 4. TLR7/NF- $\kappa$ B/SEAP Stably Transfected HEK 293 Cells (IML-107). 5. LPS from *E. Coli*, TLR4 Ligand (IMG-2204). 6. SEAPorter Assay Kit (10055K).

Potzsch S, Blankenhorn A, Navarrete Santos A et al. The effect of an AGE-rich dietary extract on the activation of NF- $\kappa$ B depends on the cell model used. Food Funct. 2013-07-01 [PMID: 23426622]

### Details:

IMGEX products cited: 1. RAW NF- $\kappa$ B/SEAP Reporter Cell Line (IML-120): Figs 3, 4 2. SEAPorter Assay Kit (10055K): Fig 3 Note: Bread crumb extract (BCE) was used as an advanced glycation end product to treat RAW IML-120 cells. NF- $\kappa$ B activation was measure

Namachivayam K, Blanco CL, Frost BL et al. Preterm human milk contains a large pool of latent TGF- $\beta$ , which can be activated by exogenous neuraminidase. Am J Physiol Gastrointest Liver Physiol. 2013-06-15 [PMID: 23558011]

### Details:

Products cited (Fig 5C): 1. RAW NF- $\kappa$ B/SEAP Reporter Cell Line (IML-120) 2. SEAPorter Assay Kit (10055K) Note: The results showed LPS activation of SEAP activity in the IML-120 cells could be attenuated by pre-treating the cells with pre-term milk + neuram

Chandrakesan P, Ahmed I, Anwar T et al. Novel changes in NF- $\kappa$ B activity during progression and regression phases of hyperplasia: role of MEK, ERK, and p38. J Biol Chem. 2010-10-22 [PMID: 20710027]

Chan M, Hayashi T, Mathewson RD et al. Identification of substituted pyrimido[5,4-b]indoles as selective Toll-like receptor 4 ligands. J Med Chem. 2013-06-13 [PMID: 23656327]

Ahmed I, Roy B, Chandrakesan P et al. Evidence of functional cross talk between the Notch and NF- $\kappa$ B pathways in nonneoplastic hyperproliferating colonic epithelium. Am J Physiol Gastrointest Liver Physiol. 2013-02-15 [PMID: 23203159]

### Details:

1. TLR4/NF- $\kappa$ B/SEAPorter HEK 293 cell line (IML-104).





### **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](http://www.novusbio.com)  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Kits are guaranteed for 6 months 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/NBP2-25285](http://www.novusbio.com/reviews/submit/NBP2-25285)

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

