

Product Datasheet

TIRAP (TLR2 and TLR4) Inhibitor Peptide Set NBP2-29331

Unit Size: 2 mg

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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NBP2-29331**TIRAP (TLR2 and TLR4) Inhibitor Peptide Set**

Product Information	
Unit Size	2 mg
Concentration	Lyoph
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Reconstitution Instructions	Please contact technical support for detailed reconstitution instructions.
Buffer	Solubilize the peptides prior to use by making 5 mM PBS* stock solutions (please see Preparation of 5 mM Stock Solutions under Preparation Method).
Product Description	
Description	TIRAP Inhibitor peptide: 2 x 1 mg (lyophilized) DRQIKIWFQNRRMKWKK <u>LQLRDAAPGGAI</u> VS (TIRAP sequence is underlined). Molecular weight: 3701.4. Antennapedia Control peptide: 2 x 1 mg (lyophilized) DRQIKIWFQNRRMKWKK. Molecular weight: 2361.
Gene ID	114609
Gene Symbol	TIRAP
Species	Human, Mouse
Reactivity Notes	The inhibitor peptide sequence is from mouse and also reacts with human; there is only one amino acid difference between the mouse and human sequence
Specificity/Sensitivity	The TIRAP inhibitory peptide contains a protein transduction (PTD) sequence (DRQIKIWFQNRRMKWKK) derived from antennapedia which renders the peptide cell permeable. The control peptide consists of only the PTD sequence.
Immunogen	Functions as a TIRAP decoy by binding to TIR interacting domains on specific TLR receptors.
Preparation Method	Preparation of 5 mM Stock Solutions PBS* is added directly to the vials to prepare the stock solutions. Note: Bring the solution to room temperature and quick spin the tubes before opening the caps. TIRAP Inhibitor Peptide: 1 mg of DRQIKIWFQNRRMKWKKLQLRDAAPGGAI VS. Add 54 ul of PBS* to the vial to make a 5 mM stock solution. Mix by vortexing. Aliquot and store at -20C or -80C. Avoid repeated freeze thawing. Control Peptide: 1 mg of DRQIKIWFQNRRMKWKK Add 84.8 ul PBS* to the vial. Mix by vortexing. Aliquot and store at 20C or -80C. Avoid repeated freeze thawing. Recipe for 1X PBS: 1. Dissolve the following in 800ml distilled H2O. - 8g of NaCl - 0.2g of KCl - 1.44g of Na2HPO4 - 0.24g of KH2PO4 2. Adjust pH to 7.5 with HCl. 3. Adjust volume to 1L with additional distilled H2O. 4. Sterilize by autoclaving
Inhibitor Family	TLR
Inhibitor Target	TLR2 and TLR4

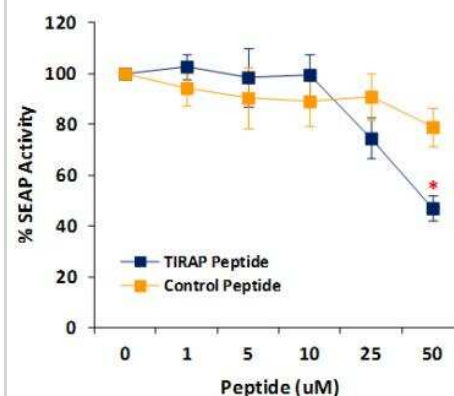
Inhibitor Content	TIRAP Inhibitor peptide: 2 x 1 mg (lyophilized) DRQIKIWFQNRRMKWKKLQLRDAAPGGAIVS (TIRAP sequence is underlined). Molecular weight: 3701.4. Antennapedia Control peptide: 2 x 1 mg (lyophilized) DRQIKIWFQNRRMKWKK. Molecular weight: 2361.
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Product Application Details

Application Notes	Inhibits TIRAP binding to TLR2 or TLR4.
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Images

Functional (Inhibition): TIRAP (TLR2 and TLR4) Inhibitor Peptide Set [NBP2-29331] - TLR2/NF- κ B/SEAPorter HEK 293 (NBP2-26274) cells were plated in 96-well plates at 5×10^4 cells/well for 16 h. Cells were preincubated with different concentrations (0, 1, 5, 10, 25 and 50 μ M) of Inhibitory Peptide (NBP2-29331) and Control Peptide (NBP2-29334) for 1 h. Cells were then stimulated with 1 ng/ml Pam3CSK4 (NBP2-25297) for 24 h. Secreted alkaline phosphatase (SEAP) was analyzed using SEAPorter Assay Kit (NBP2-25285). * $p < 0.05$ versus control peptide at the corresponding concentrations (Mann-Whitney U test).



Publications

Higgins MJ, Serrano A, Boateng KY et al. A Multifaceted Role for Myd88-Dependent Signaling in Progression of Murine Mammary Carcinoma. *Breast Cancer (Auckl)*. 2016-11-04 [PMID: 27812285] (In vitro, Mouse)

Liang S, Wang M, Tapping RI et al. Ganglioside GD1a is an essential coreceptor for Toll-like receptor 2 signaling in response to the B subunit of type IIb enterotoxin. *J Biol Chem*. 2007-03-09 [PMID: 17227759]

Brown GT, McIntyre TM. Lipopolysaccharide signaling without a nucleus: kinase cascades stimulate platelet shedding of proinflammatory IL-1 β -rich microparticles. *J Immunol*. 2011-05-01 [PMID: 21430222]

Details:

TIRAP (IMG-2006-1), MyD88 (IMG-2005), and TRAF6 (IMG-2002) Inhibitory Peptide Sets. FA: Human and mouse blood platelets treated with or without LPS, soluble CD14, inhibitory peptides, and LBP. Readout assay: real time-PCR, Fig 2 & 6.

Scott MJ, Billiar TR. Beta2-integrin-induced p38 MAPK activation is a key mediator in the CD14/TLR4/MD2-dependent uptake of lipopolysaccharide by hepatocytes. *J Biol Chem*. 2008-10-24 [PMID: 18701460] (Mouse)

Details:

1. MyD88 (IMG-2005): MyD88 peptide inhibition (mouse WT hepatocytes), Figs. 4A,D. 2. TIRAP (IMG-2006): TIRAP peptide inhibition (mouse WT hepatocytes), Figs. 4B,D; 5B; 6E.

Procedures

MSDS (NBP2-29331)

TIRAP (TLR2 and TLR4) Inhibitor Peptide Set:

Hazard Information

Chemical Name: Non hazardous products

Chemical Formula: N/A

CAS Number: N/A

EEC-No: N/A

Hazard Identification

None

First Aid Measures

Eye Contact: None

Skin Contact: None

Inhalation: None

Ingestion: None

Accidental Release Measures

This product either does not contain hazardous constituents or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200 and the European Directive 91/155/EEC. 88/379/EEC, and 67/546/EEC.

Handling and Storage

Exposure Controls / Personal Protection

Other Precautions: None

Physical and Chemical Properties

Form: N/A

Color: N/A

Odor: N/A

Melting Point: N/A

Boiling Temperature: N/A

Density: N/A

Vapor Pressure: N/A

Solubility in Water: N/A

Flash Point: N/A

Explosion limits: N/A

Ignition Temperature: N/A





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 NBP2-29331

NBP2-22871	Recombinant Human TIRAP (TLR2 and TLR4) His Protein
210-TA-005	TNF-alpha [Unconjugated]
NBP2-08583	TIRAP (TLR2 and TLR4) Overexpression Lysate
M6000B-1	IL-6 [HRP]

Limitations

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

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