Product Datasheet

Pam3CSK4, TLR1 and TLR2 Ligand
NBP2-25297

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Reviews: 1 Publications: 30

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
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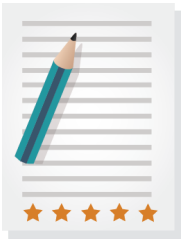
Updated 10/23/2024 v.20.1



NBP2-25297

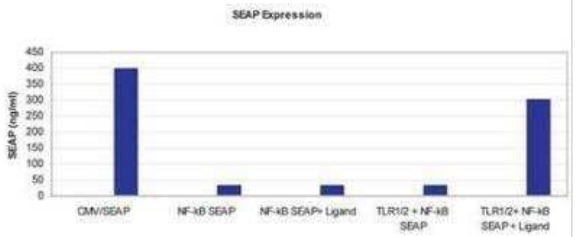
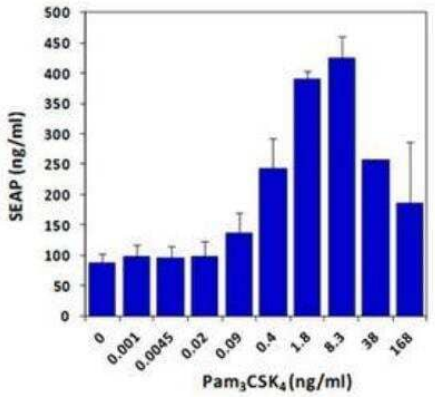
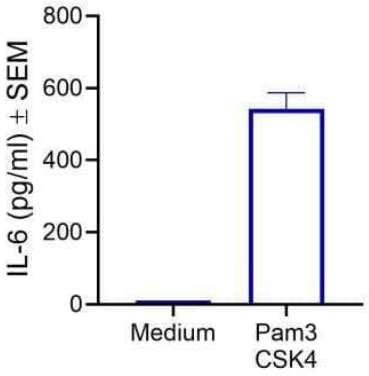
Pam3CSK4, TLR1 and TLR2 Ligand

Product Information	
Unit Size	0.1 mg
Concentration	Please see the protocols for proper use of this product. If no protocol is available, contact technical services for assistance.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Buffer	Sterile Water

Product Description	
Description	Pam3CSK4, TLR1 and TLR2 Ligand is a synthetic tripalmitoylated lipohexapeptide analog of the immunologically active N-terminal portion of bacterial lipoprotein. It activates monocytes and macrophages and is also a potent activator of proinflammatory transcription factor NF-kB. Pam3CSK4, TLR1 and TLR2 Ligand is recognized by a heterodimer formed between TLR1 and TLR2.Pam3CSK4, TLR1 and TLR2 Ligand stimulation: If your cell line does not naturally express TLR1+ TLR2, co-transfect with plasmids pCMV/TLR1and pCMV/TLR2. Forty-eight hrs after transfection, stimulate cells with 10 to 100 ng/ml of Pam3CSK4 for 6-24 hrs. Determine Pam3CSK4 stimulation using appropriate detection assays.
Species	Human, Mouse, Bacteria, Chicken
Reactivity Notes	Human reactivity reported in scientific literature (PMID: 24105263). Mouse reactivity reported in scientific literature (PMID: 25511699) Use in Chicken reported in scientific publication (PMID: 32733155). Use in Bacteria reported in scientific publication (PMID: 31482074).
Specificity/Sensitivity	Pam3CSK4, TLR1 and TLR2 Ligand

Product Application Details	
Applications	Functional, In vitro assay, In vivo assay, Ligand Activation
Recommended Dilutions	Functional, In vitro assay, In vivo assay, Ligand Activation

Images

Pam3CSK4, TLR1 and TLR2 Ligand [NBP2-25297] - 293 cells were transfected with pCMV/TLR1-2 plasmid and pNF-kB/SEAP plasmid using Lipofectamin 2000. After 48 hrs of transfection, 50 ng/ml of Pam3CSK4 was added. Cells were incubated at 37C for 24 hrs. Transfected cell supernatant was collected and analyzed using the NF-kB SEAPorter Assay kit. pCMV/SEAP plasmid was used to check transfection efficiency.	
Pam3CSK4, TLR1 and TLR2 Ligand [NBP2-25297] - Evaluation of the ligand activity on TLR2/NF-kB SEAPorter HEK 293 cell line. IML-102 cell line is a stably co-transfected cell line that expresses full-length human Toll-like receptor 2 (TLR2) and the secreted alkaline phosphatase reporter gene under the transcriptional control of an NF-KB response element. IML-102 cells were plated in 96-well plates at 5 x 10^4 cells/well. After 16 h, cells were stimulated with various amounts of for 24 h. SEAP was analyzed using the SEAPorter Assay Kit . Data Summary: specifically activated the TLR2/1-depedent NF-KB/SEAP reporter cells in a dose dependent manner (Note: HEK 293 cells endogenously express TLR1).	
Pam3CSK4, TLR1 and TLR2 Ligand [NBP2-25297] - Differentiated human macrophages were treated with or without 50 ng/mL Pam3CSK4 for 2 h, and the release of IL-6 in culture supernatants of cells was measured by ELISA kit.	

Publications

Liu Y, Diamond SL. Activation of Most Toll-Like Receptors in Whole Human Blood Attenuates Platelet Deposition on Collagen under Flow Journal of Immunology Research 2023-01-17 [PMID: 36703865] (Block/Neutralize)

Yamamoto M, Miyoshi M, Morioka K et al. Anti-nucleolin aptamer, iSN04, inhibits the inflammatory responses in C2C12 myoblasts by modulating the ?-catenin/NF-?B signaling pathway Biochemical and biophysical research communications 2023-04-26 [PMID: 37127012]

Horii T, Orikawa Y, Ohira Y et al. Peptidoglycan-Like Components in Z-100, Extracted from Mycobacterium tuberculosis Strain Aoyama B, Increase IL-12p40 via NOD2 Journal of Immunology Research 2022-06-22 [PMID: 35785036] (LA)

Kawahara T, Ito A, Kiso A, Kawamoto F Inhibitory effect of strawberry geranium (Saxifraga stolonifera) on Toll-like receptor 2-mediated inflammatory response in human skin keratinocytes Journal of Ethnopharmacology 2021-04-01 [PMID: 33819504]

Terada T, Nii T, Isobe N, Yoshimura Y Effects of Toll-like Receptor Ligands on the Expression of Proinflammatory Cytokines and Avian beta-defensins in Cultured Chick Intestine J Poult Sci 2020-07-25 [PMID: 32733155] (Chicken)

Kanoh H, Nitta T, Go S et al. Homeostatic and pathogenic roles of GM3 ganglioside molecular species in TLR4 signaling in obesity EMBO J. 2020-05-07 [PMID: 32378734] (Mouse)

Effects of TLR Ligands on the Expression of Cytokines and Possible Role of NFkB in its Process in the Theca of Chicken Follicles Kang Y, Nii T, Isobe N J Poult Sci [PMID: 32055188] (Func, Chicken)

Effects of delayed hypothermia on time?dependent microglial production of inflammatory and anti?inflammatory factors. Matsui T, Kida H, Iha T et al. Folia Neuropathol [PMID: 25118900] (Func, Mouse)

Croasdell A, Sime PJ, Phipps RP Resolvin D2 decreases TLR4 expression to mediate resolution in human monocytes FASEB J. 2016-09-30 [PMID: 27256622] (LA, LA, Human)

Yamaguchi M, Hirose Y, Takemura M, et al Streptococcus pneumoniae Evades Host Cell Phagocytosis and Limits Host Mortality Through Its Cell Wall Anchoring Protein PfbA. Front Cell Infect Microbiol. 2019-08-20 [PMID: 31482074] (Bacteria)

Details:
Mice were infected with S. pneumoniae.

Sun L, Hult EM, Cornell TT et al. Loss of myeloid-specific protein phosphatase 2A enhances lung injury and fibrosis and results in IL-10 dependent sensitization of epithelial cell apoptosis Am. J. Physiol. Lung Cell Mol. Physiol. 2019-03-06 [PMID: 30838865] (Func, Mouse)

Nihashi Y, Ono T, Kagami H, Takaya T. Toll-like receptor ligand-dependent inflammatory responses in chick skeletal muscle myoblasts. J. Orthop. Res. 2018-10-31 [PMID: 30389519]

More publications at http://www.novusbio.com/NBP2-25297

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