

Product Datasheet

Curcumin NBP2-26243-1g

Unit Size: 1 g

Store at -20C. Avoid freeze-thaw cycles.

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NBP2-26243-1g

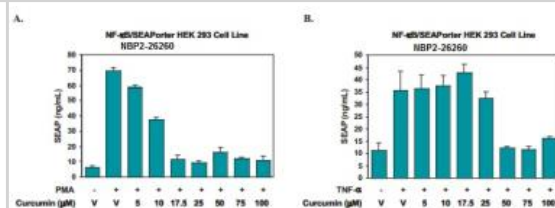
Curcumin

Product Information	
Unit Size	1 g
Concentration	Please see the protocols for proper use of this product. If no protocol is available, contact technical services for assistance.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Reconstitution Instructions	Reconstitute with DMSO to bring curcumin to a final concentration of 11 mg/ml.
Product Description	
Species	Human
Immunogen	CAS Number 458-37-7 Linear Formula [HOC6H3(OCH3)CH=CHCO]2CH2 Molecular Weight 368.38 Beilstein Registry Number 2306965 Colour Index Number 75300 EC Number 207-280-5 MDL number MFCD00008365 PubChem Substance ID 24892408
Product Application Details	
Application Notes	1. Inhibition of NF-κB signaling. This includes inhibition of NF-κB activity induced by Toll-like receptor (TLR) ligands, TNF-phorbol-12-myristate-13-acetate (PMA), and hydrogen peroxide. 2. Inhibition of other cell signaling molecules including c-Jun/AP-1, Protein kinase C, MAPK, Bcl-2, COX-2, EGFR, and mTOR pathways. Additionally, curcumin can directly inhibit homodimerization of TLR4. 3. Curcumin activates certain signaling molecules including Src and Bcl-XS. 4. Researchers are encouraged to consult the literature regarding additional information on curcumin applications.

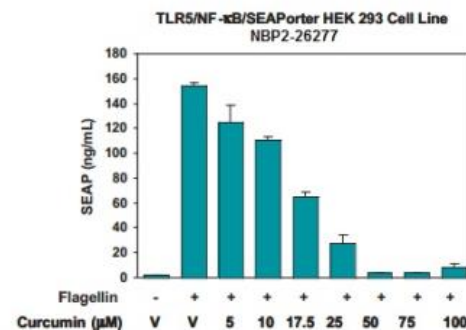


Images

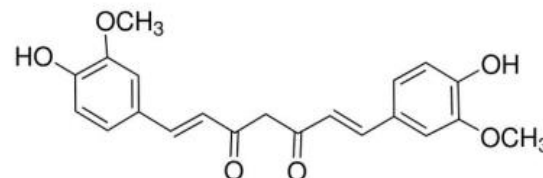
Curcumin [NBP2-26243] - inhibition of PMA and TNF- α activated NF- κ B signaling. NF- κ B/SEAPorter™ HEK 293 (NBP2-26260) cells were plated in 12-well plates (0.5×10^6 cells/well) for 16 h. Cells were preincubated with different concentrations of DMSO-solubilized curcumin for 2 h or a DMSO vehicle (V) control. Cells were then stimulated with 10 ng/ml phorbol-12-myristate-13-acetate (PMA) [A] or 10 ng/ml TNF- α [B] for 24 h. The SEAPorter Assay Kit was used to measure SEAP, the readout assay for measuring NF- κ B activation in TLR5/NF- κ B cells. The results showed that the cells had basal level of NF- κ B activity which was increased by PMA or TNF- α . They also show that curcumin decreased PMA and TNF- α activated NF- κ B signaling in a dose-dependent manner.



Ligand Activation: Curcumin [NBP2-26243] - Curcumin inhibition of ligand activated TLR/NF- κ B signaling. TLR5/NF- κ B/SEAPorter™ HEK 293 (NBP2-26277) cells were plated in 12-well plates (0.5×10^6 cells/well) for 16 h. Cells were preincubated with increasing concentrations of DMSO-solubilized curcumin (IMG-2010) for 2 h or a DMSO vehicle (V) control. Cells were stimulated with the TLR5 ligand Flagellin (10 ng/ml: NBP2-25289 for 24 h. The SEAPorter Assay Kit was used to measure SEAP, the readout assay for measuring NF- κ B activation in TLR5/NF- κ B cells. The results showed that the cells had a minimal basal level of NF- κ B activity which was dramatically increased by Flagellin. They also, shown that curcumin decreased Flagellin-activated NF- κ B signaling in a dose-dependent manner.



Curcumin [NBP2-26243]



Procedures

Product Handling Protocol (NBP2-26243)

1. Add DMSO to bring curcumin to desired concentration; Solubility is at 11mg/ml
2. Dissolve curcumin in DMSO completely by gentle vortex.
3. Divide into useable aliquots and store them at -80C (Stock solutions are stable for up to 3 months at -80C).
4. Thaw stock solution briefly in a 37C water bath just prior to use.
5. Perform a pilot inhibitory assay with different concentrations of curcumin ranging from 5 to 100 M to optimize your experiments.



Novus Biologicals USA

8100 Southpark Way, A-8
Littleton, CO 80120
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
novus@novusbio.com

Novus Biologicals Canada

461 North Service Road West, Unit B37
Oakville, ON L6M 2V5
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada@novusbio.com

Novus Biologicals Europe

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@bio-techne.com

General Contact Information

www.novusbio.com
Technical Support: technical@novusbio.com
Orders: orders@novusbio.com
General: novus@novusbio.com

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