

# Product Datasheet

## Curcumin NBP2-26243-5g

Unit Size: 5 g

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

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**NBP2-26243-5g**

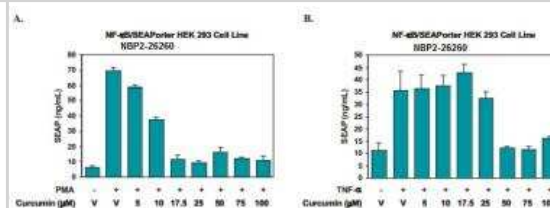
Curcumin

<b>Product Information</b>	
<b>Unit Size</b>	5 g
<b>Concentration</b>	Please see the protocols for proper use of this product. If no protocol is available, contact technical services for assistance.
<b>Storage</b>	Store at -20C. Avoid freeze-thaw cycles.
<b>Reconstitution Instructions</b>	Reconstitute with DMSO to bring curcumin to a final concentration of 11 mg/ml.
<b>Product Description</b>	
<b>Species</b>	Human
<b>Immunogen</b>	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
<b>Product Application Details</b>	
<b>Application Notes</b>	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.

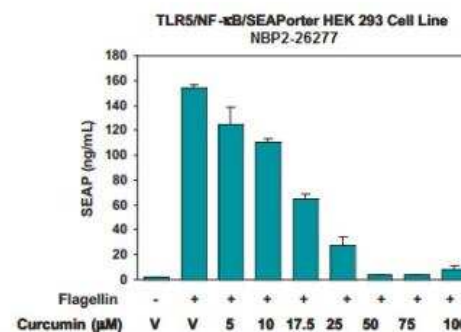


## Images

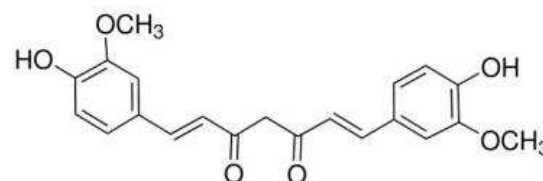
Curcumin [NBP2-26243] - inhibition of PMA and TNF- $\alpha$  activated NF- $\kappa$ B signaling. NF- $\kappa$ B/SEAPorter™ HEK 293 (NBP2-26260) cells were plated in 12-well plates ( $0.5 \times 10^6$  cells/well) for 16 h. Cells were preincubated with different concentrations of DMSO-solubilized curcumin 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- $\alpha$  [B] for 24 h. The SEAPorter Assay Kit was used to measure SEAP, the readout assay for measuring NF- $\kappa$ B activation in TLR5/NF- $\kappa$ B cells. The results showed that the cells had basal level of NF- $\kappa$ B activity which was increased by PMA or TNF- $\alpha$ . They also show that curcumin decreased PMA and TNF- $\alpha$  activated NF- $\kappa$ B signaling in a dose-dependent manner.



Ligand Activation: Curcumin [NBP2-26243] - Curcumin inhibition of ligand activated TLR/NF- $\kappa$ B signaling. TLR5/NF- $\kappa$ B/SEAPorter™ HEK 293 (NBP2-26277) cells were plated in 12-well plates ( $0.5 \times 10^6$  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- $\kappa$ B activation in TLR5/NF- $\kappa$ B cells. The results showed that the cells had a minimal basal level of NF- $\kappa$ B activity which was dramatically increased by Flagellin. They also, shown that curcumin decreased Flagellin-activated NF- $\kappa$ B signaling in a dose-dependent manner.



Curcumin [NBP2-26243]



## Procedures

### Product Handling Protocol (NBP2-26243)

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.



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### Limitations

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