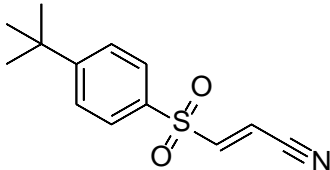


# Product data sheet



MedKoo Cat#: 522393 Name: BAY 11-7085 CAS#: 196309-76-9 Chemical Formula: C <sub>13</sub> H <sub>15</sub> NO <sub>2</sub> S Exact Mass: 249.0824 Molecular Weight: 249.33		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

## 1. Product description:

BAY 11-7085, a soluble inhibitor of NK-kappaB activation, has been shown to inhibit cell proliferation and induce apoptosis of a variety of cells. BAY 11-7085 induces apoptosis of ECSCs by suppressing antiapoptotic proteins, and that caspase-3-, -8-, and -9-mediated cascades are involved in this mechanism. BAY 11-7085 could be used as a therapeutic agent for the treatment of endometriosis. BAY 11-7085 protects against gut ischemia-reperfusion injury.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	30.23	121.24
Ethanol	31.64	126.90

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.01 mL	20.05 mL	40.11 mL
5 mM	0.80 mL	4.01 mL	8.02 mL
10 mM	0.40 mL	2.01 mL	4.01 mL
50 mM	0.08 mL	0.40 mL	0.80 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

## 6. Recommended literature which reported protocols for in vitro and in vivo study

### In vitro study

1. Relic B, Charlier E, Derooyer C, Malaise O, Neuville S, Desoroux A, Gillet P, de Seny D, Malaise MG. BAY 11-7085 induces glucocorticoid receptor activation and autophagy that collaborate with apoptosis to induce human synovial fibroblast cell death. *Oncotarget*. 2016 Apr 26;7(17):23370-82. doi: 10.18632/oncotarget.8042. PMID: 26993765; PMCID: PMC5029633.
2. Nasu K, Nishida M, Ueda T, Yuge A, Takai N, Narahara H. Application of the nuclear factor-kappaB inhibitor BAY 11-7085 for the treatment of endometriosis: an in vitro study. *Am J Physiol Endocrinol Metab*. 2007 Jul;293(1):E16-23. doi: 10.1152/ajpendo.00135.2006. Epub 2006 Aug 8. PMID: 16896168.

### In vivo study

1. González-Ramos R, Van Langendonck A, Defrère S, Lousse JC, Mettlen M, Guillet A, Donnez J. Agents blocking the nuclear factor-kappaB pathway are effective inhibitors of endometriosis in an in vivo experimental model. *Gynecol Obstet Invest*. 2008;65(3):174-86. doi: 10.1159/000111148. Epub 2007 Nov 20. PMID: 18025832.
2. Politz O, Siegel F, Bärfacker L, Bömer U, Hägebarth A, Scott WJ, Michels M, Ince S, Neuhaus R, Meyer K, Fernández-Montalván AE, Liu N, von Nussbaum F, Mumberg D, Ziegelbauer K. BAY 1125976, a selective allosteric AKT1/2 inhibitor, exhibits high

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efficacy on AKT signaling-dependent tumor growth in mouse models. Int J Cancer. 2017 Jan 15;140(2):449-459. doi: 10.1002/ijc.30457. Epub 2016 Oct 20. PMID: 27699769.

## 7. Bioactivity

Biological target: BAY 11-7085 (Bay 11-7083) is an inhibitor of TNF $\alpha$ -induced I $\kappa$ B $\alpha$  phosphorylation with an IC<sub>50</sub> of 10  $\mu$ M.

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### In vitro activity

BAY 11-7085 induced an increase of autophagosomal marker LC3B-II, a lipidated form of LC3B, from 10-60 minutes, that ceased and that was down regulated from 90-120 min of cell treatment (Figure 1). BAY 11-7085 also induced GR (glucocorticoid receptor) phosphorylation of Serine 211 (Figure 1). Furthermore, BAY 11-7085 markedly down regulated GR expression (Figure 1). These results suggested that BAY 11-7085-induced autophagy and GR activation might be interconnected.

Reference: Oncotarget. 2016 Apr 26;7(17):23370-82. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5029633/>

### In vivo activity

The involvement of NF-kappaB and the processes regulated by NF-kappaB in the initial development of endometriotic lesions was investigated in a mouse model of endometriosis. BAY 11-7085 induced a significant reduction in lesion development compared to control mice. NF-kappaB activation and ICAM-1 expression of endometriotic lesions were significantly reduced in treated mice, and cell proliferation was significantly reduced in BAY 11-7085-treated mice. BAY 11-7085 produced a significant increase in apoptosis of endometriotic lesions, as assessed by active caspase-3 immunostaining and the TUNEL method.

Reference: Gynecol Obstet Invest. 2008;65(3):174-86. <https://www.karger.com/Article/Abstract/111148>

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*