



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Expressversand

### SZABO-SCANDIC HandelsgmbH

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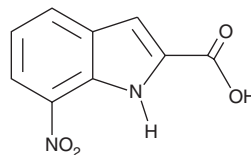
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# PRODUCT INFORMATION

## DNA Base Excision Repair Pathway Inhibitor

Item No. 16348

**CAS Registry No.:** 6960-45-8  
**Formal Name:** 7-nitro-1H-indole-2-carboxylic acid  
**Synonyms:** CRT0044876, 7-Nitroindole-2-Carboxylic Acid, NSC 69877  
**MF:** C<sub>9</sub>H<sub>6</sub>N<sub>2</sub>O<sub>4</sub>  
**FW:** 206.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 222, 243, 358 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

DNA base excision repair pathway inhibitor is supplied as a crystalline solid. A stock solution may be made by dissolving the DNA base excision repair pathway inhibitor in the solvent of choice, which should be purged with an inert gas. DNA base excision repair pathway inhibitor is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of DNA base excision repair pathway inhibitor in these solvents is approximately 0.2, 5, and 1 mg/ml, respectively.

DNA base excision repair pathway inhibitor is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DNA base excision repair pathway inhibitor should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. DNA base excision repair pathway inhibitor has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Apurinic/apyrimidinic endonuclease-1 (Ape-1) is involved in base excision repair, cleaving the phosphodiester linkage that is 5' to the abasic site to produce a single strand break.<sup>1</sup> DNA base excision repair pathway inhibitor is a cell-permeable inhibitor of Ape-1 (IC<sub>50</sub> = 3-11 μM).<sup>1-3</sup> Although not toxic to cells by itself at 200 μM, it enhances the cytotoxicity of certain DNA alkylating agents, including temozolomide, when added at this concentration.<sup>2</sup> DNA base excision repair pathway inhibitor has little or no effect on radiation-induced cell survival.<sup>2,4</sup>

### References

1. Srinivasan, A., Wang, L., Cline, C.J., *et al.* Identification and characterization of human apurinic/apyrimidinic endonuclease-1 inhibitors. *Biochemistry* **51**(31), 6246-6259 (2012).
2. Madhusudan, S., Smart, F., Shrimpton, P., *et al.* Isolation of a small molecule inhibitor of DNA base excision repair. *Nucleic Acids Res.* **33**(15), 4711-4724 (2005).
3. Mohammed, M.Z., Vyjayanti, V.N., Laughton, C.A., *et al.* Development and evaluation of human AP endonuclease inhibitors in melanoma and glioma cell lines. *Br. J. Cancer* **104**(4), 653-663 (2011).
4. Naidu, M.D., Mason, J.M., Pica, R.V., *et al.* Radiation resistance in glioma cells determined by DNA damage repair activity of Ape1/Ref-1. *J. Radiat. Res.* **51**(4), 393-404 (2010).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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