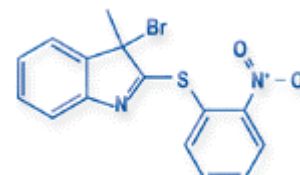


# BNPS-Skatole

## Product Description

*a mild oxidant and brominating reagent that leads to polypeptide cleavage on the C-terminal side of tryptophan residues*

**Catalog number:** UP20955A, 100mg  
**Name:** **BNPS-Skatole**  
**Formula :** 2-(2'-Nitrophenylsulfonyl)-3-methyl-3-bromoindolenine  
 $C_{15}H_{11}N_2O_2SBr$ , CAS: 27933-36-4 , , **M.W.= 363.2**  
 Mp: 97-100°C  
 S: 24/25



**Storage :** +4°C (long term at -20°C), protect from moisture and light. (M)

## Technical Information

BNPS-skatole can be dissolved in acetone, and in chloroform (50 mg/ml), yielding a clear, bright yellow solution. It is also soluble in acetic acid.

BNPS-skatole (3-bromo-3-methyl-2-(2-nitrophenyl)thiol-3H-indole) has been used to specifically cleave at peptide bonds after amino acids with available  $C\gamma=C\delta$  double bonds, i.e. tryptophan, tyrosine and histidine (Hunziker 1980). The resulting C-terminal lactones can be attached to amino-containing compounds or supports. BNPS-skatole has also been used to inactivate enzymes essential site containing trp (Hong Xue 1997).

Use of BNPS-skatole

### Use of BNPS skatole

BNPS-skatole cleavage can be performed as follows [Hunziker 1980]:

1. Prepare a solution containing 10-fold molar excess of BNPS-skatole in 70% distilled acetic acid containing 0.1% phenol.
2. Incubate the peptide with the BNPS-Skatole solution for 48 hours at room temperature.
3. Add a 10-fold molar excess of 2-mercaptoethanol or other reducing agent.  
Note: as a guide line for 100µg of protein, use 2mg BNPS-skatole.
4. Incubate the solution for 5 hours at 37 °C, or 48 h room temperature under N<sub>2</sub> atmosphere in the dark.
5. Excess BNPS-skatole can be extracted with ethyl acetate, and the resulting aqueous phase can be either freeze-dried or dried by evaporation.
6. Check cleavage products (or lack of) from aqueous phase by SDS-PAGE.

### Alternative method

[Fontana 1972]BNPS-skatole cleavage was performed for B(B)HA2 in 60% acetic acid (0.5µg of protein/µl) in the presence of 1 part of tyrosine and 10 parts of BNPS-skatole (by weight) under nitrogen for 20 h in the dark. Subsequently, excess cleavage reagent and by-products were extracted with 3 volumes of ethyl acetate. The aqueous phase was dried in the Speed Vac, and the residue dissolved in sample buffer for subsequent SDS-PAGE.

[Huang 1994]This method uses a combination of KI/CNBr and has specificity for Met and Trp. Also is not necessary extraction step. 10-50µg of protein in 70% TFA, 2ul KI (12mM), 20ul of CNBr (6.2mg/ml in acetonitrile) overnight at room temperature in the dark. Dry it down in speed vac and re-suspend in appropriate buffer for RP-HPLC or electrophoresis. Alternative buffers is given by the authors

## Other Information

For use *in vitro* only, not for diagnostic.

Contact your local distributor

Uptima, powered by

FT-UP18971

For any information, please contact Uptima, or your local distributor.

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**Related products :**

CelluSep : dialysis membranes

Other cleavable protein modifiers and crosslinkers (inquire)

**Literature:**

.Fernandez (1985)

.Fontana, A, Modification of tryptophan with BNPS skatole (2-(2-nitrophenylsulfenyl)-3-methyl-3-bromoindolenine) Meth. Enzymol. 25, 419-423 (1972)

.Hong Xue, Yilong Xue, Sylvie Doublé, and Charles W. Carter, Jr. ; Chemical modifications of Bacillus subtilis tryptophanyl-tRNA synthetase ; Biochem. Cell Biol./Biochim. Biol. Cell. 75(6): 709-715 (1997); [Abstract](#), [Article](#)

.Huang et al, J.Protein Chemistry, vol.13,n 5, 450-451, 1994.

.Hunziker PE, Hughes GJ, Wilson KJ.; Peptide fragmentation suitable for solid-phase microsequencing. Use of N-bromosuccinimide and BNPS-skatole (3-bromo-3-methyl-2-[(2-nitrophenyl)thio]-3H-indole); Biochem J. 1980 May 1;187(2):515-9. [Abstract](#), [Article](#)

.Koulich D., Orlova M., Malhotra A; Sali A., Darst S., and Borukhov S.; Domain Organization of Escherichia coli Transcript Cleavage Factors GreA and GreB; Journ. Biol.Chem. Vol. 272, No. 11, Issue of March 14, pp. 7201-7210, 1997

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