



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## SIAH1, E3 Ubiquitin Ligase Blocking Peptide

### BACKGROUND

Seven in absentia homolog 1 (SIAH-1) is a member of the RING-finger-containing E3 ubiquitin ligases. Alpha-synuclein and synphilin-1 are substrates of SIAH-1, both proteins are involved in the development of Parkinson's disease (PD). Mutations in Parkin, another E3 ubiquitin ligase which ubiquitinates synphilin-1 and glycosylated alpha-synuclein, have been defined as a major cause of autosomal recessive PD. The role of SIAH-1 in PD is highlighted by the fact that SIAH-1 is a component of the Lewy bodies and plays a role in apoptosis caused by nitric oxide (NO) induced oxidative stress.

Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) a classic glycolytic enzyme, and multi-functional protein. GAPDH plays role as a mediator for cell death. GAPDH translocates to the nucleus under a variety of stressors/conditions, most of which are associated with oxidative stress. Sequential steps lead to nuclear translocation of GAPDH during cell death; 1] a catalytic cysteine in GAPDH (C150 in rat GAPDH) is S-nitrosylated by nitric oxide (NO) which is generated from inducible nitric oxide synthase (iNOS) and/or neuronal NOS (nNOS); 2] the modified GAPDH becomes capable of binding with Siah1, an E3 ubiquitin ligase, and stabilizes it; 3] the GAPDH-Siah protein complex translocates to the nucleus, dependent on Siah1's nuclear localization signal, and degrades Siah1's substrates in the nucleus, which results in cytotoxicity.

GAPDH may be genetically associated with late-onset Alzheimer's disease. (-)-deprenyl, which has been used as a monoamine oxidase inhibitor for Parkinson's disease, binds to GAPDH and has neuroprotective actions. The molecular action of this protection is as yet not clear.

### COMMENTS

Blocking peptide for use with SIAH1 antibodies (Cat. Nos. X1859P & X1864P).

### INSTRUCTIONS

Incubate antibody neat with at least a 50 fold stoichiometric excess of blocking peptide at 37 deg C for 20 minutes (molecular weights of peptide and antibody are ~2.5 kDa and ~160 kDa, respectively). Antibody can then be diluted to a concentration suitable for Western blot.

Example: 10  $\mu$ l or 10  $\mu$ g of Exalpa's rabbit anti-SIAH1 (Cat. No. X1859P or X1864P) is added to 10  $\mu$ g of blocking peptide for a total volume of 20  $\mu$ l. The mixture is allowed to incubate for 20 minutes at 37 deg C prior to dilution in suitable buffer (for Western blot, etc.).

### ORDERING INFORMATION

#### CATALOG NUMBER

X1854B

#### SIZE

50  $\mu$ g

#### CUSTOMER STORAGE

Product should be stored at -20°C.  
Aliquot to avoid freeze/thaw cycles

#### FORMULATION

Provided as solution in phosphate buffered saline with 0.08% sodium azide

#### SHIP CONDITIONS

Ship at ambient temperature, freeze upon arrival

#### STABILITY

Products are stable for one year from purchase when stored properly