

Product datasheet for **AP05260PU-N**

SIAH1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	Western blot: 1-5 µg/ml). Positive control: human brain lysate.
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Synthetic peptide derived from the human SIAH-1 protein
Specificity:	This antibody detects SIAH1.
Formulation:	Phosphate buffered saline with 0.08 % sodium azide State: Aff - Purified State: Liquid Ig fraction
Concentration:	lot specific
Purification:	Affinity chromatography
Conjugation:	Unconjugated
Storage:	Ship on dry ice. Upon arrival, aliquot and freeze at -20 °C to -70 °C. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	siah E3 ubiquitin protein ligase 1
Database Link:	Entrez Gene 6477 Human Q8IUQ4



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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.

Synonyms:

Siah-1, Siah-1a, HUMSIAH

Product images:

Western blot using, affinity purified rabbit polyclonal at 1 ug/ml on human brain lysate (20 ug/lane). Blots were developed with goat anti-Mlg (1:30k) and Pierce's Supersignal West Femto system.