

## Product Information

### Anti-ZNF746

produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200530**

### Product Description

Anti-ZNF746 is produced in rabbit using as immunogen a synthetic peptide corresponding to an internal sequence of human ZNF746 (GeneID: 155061), conjugated to KLH. The corresponding sequence is identical in human ZNF746 isoform 2, and in mouse and rat ZNF746. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-ZNF746 specifically recognizes human, rat and mouse ZNF746. The antibody may be used in several immunochemical techniques including immunoblotting (~90 kDa) and immunofluorescence. Detection of the ZNF746 band by immunoblotting is specifically inhibited by the ZNF746 immunizing peptide.

Parkinson's disease (PD) is a neurodegenerative disorder of the central nervous system (CNS). The motor symptoms of Parkinson's disease result from the death of dopaminergic cells (DA) in the substantia nigra.<sup>1</sup> ZNF746 (zinc finger protein 746, also known as PARIS, parkin interacting substrate), is a 644 amino acid protein that contains a Kruppel-associated box (KRAB) at its N-terminal and a C2HC/C2H2 type zinc finger at its C terminals. This protein is highly conserved among human, mouse and rat, and widely expressed in many tissues. ZNF746 has been shown to be accumulated in PD models and in human PD brain, and has been suggested to play a role in the progress of PD disease.<sup>2-4</sup> ZNF746 represses the expression of the transcriptional coactivator, PGC-1 $\alpha$  and the PGC-1 $\alpha$  target gene, NRF-1, by binding to insulin response sequences in the PGC-1 $\alpha$  promoter. ZNF746 is also regulated by the E3 ubiquitin ligase, parkin.<sup>2</sup>

Knockdown of parkin in animal models leads to the progressive loss of DA neurons in the substantia nigra in a ZNF746-dependent manner. In addition, over-expression of ZNF746 leads to the selective loss of DA neurons in the substantia nigra, an effect that is reversed by either coexpression of parkin or PGC-1 $\alpha$ .

### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.0 mg/mL

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

### Product Profile

**Immunoblotting:** a working concentration of 1-2  $\mu$ g/mL is recommended using rat brain extracts (S2 fraction) and NIH3T3 fibroblast cell extracts.

**Immunofluorescence:** a working concentration of 2.5-5.0  $\mu$ g/mL is recommended using SH-SY-5Y cells.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

### References

1. Kumar, K.R., et al., *Curr. Opin. Neuro.*, **25**, 466-474 (2012).
2. Shin, J.H., et al., *Cell*, **144**, 689-702 (2011).
3. Khoo, T.K., *Mov. Disord.*, **26**, 722-727 (2011).
4. Castillo-Quan, J.I., *Dis. Mod. Mech.*, **4**, 427-429 (2011).

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