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## Product Information

### Anti-HIP14

produced in rabbit, affinity isolated antibody

Catalog Number **H7414**

### Product Description

Anti-HIP14 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 614-632 located at the C-terminus of human HIP14 (GeneID: 23390), conjugated to KLH. This sequence is identical in mouse, rat, dog, and bovine HIP14. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-HIP14 specifically recognizes human HIP14 (~78 kDa) and mouse HIP14 (~75 kDa) by immunoblotting. Staining of the HIP14 band in immunoblotting is specifically inhibited by the immunizing peptide.

Huntington's disease (HD) is caused by polyglutamine (polyQ) expansion in the protein huntingtin (htt). The mechanism of disease progression remains to be elucidated, however, altered interactions of mutant htt with its protein partners could contribute to the disease. HIP14 (also known as zinc finger, DHHC domain containing protein 17 (ZDHHC17), huntingtin interacting protein H (HYPH), huntingtin interacting protein 3 (HIP3), HSPC294 and KIAA0946) is a novel htt interacting protein.<sup>1,2</sup> The interaction of HIP14 with htt is inversely correlated to the polyQ length in htt. HIP14 mRNA is predominantly expressed in the brain. HIP14 protein is enriched in the brain, it shows partial co-localization with htt in the striatum, and is found in medium spiny projection neurons, the subset of neurons affected in HD. HIP14 localizes to the Golgi, and to vesicles in the cytoplasm. HIP14 is a neuronal palmitoyl transferase (PAT).<sup>2,3</sup> It shows specificity for several neuronal proteins including SNAP-25, PSD-95, GAD65, synaptotagmin and htt. RNA interference with endogenous expression of HIP14 has been shown to reduce clustering of PSD-95 and GAD65 in neurons. It has been suggested that HIP14 has a role in palmitoylation and in regulating the intracellular trafficking of multiple neuronal proteins. Palmitoylation of htt by HIP14 is essential for its trafficking and function.<sup>4</sup> Decreased interaction between mutant htt and HIP14 could contribute to neuronal dysfunction in HD by perturbing normal intracellular transport pathways in neurons.

### Reagent

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

Antibody concentration: ~1 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 0.5-1 µg/mL is recommended using extracts of HEK-293T cells expressing human HIP14 and using mouse brain extracts (P2 membrane fraction).

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

### References

1. Singaraja, R.R., et al., *Human Mol. Gen.*, **11**, 2815-2828 (2002).
2. Huang, K., et al., *Neuron*, **44**, 977-986 (2004).
3. Decker, C.E., et al., *Oncogene*, **23**, 9230-9237 (2004).
4. Yanai, A., et al., *Nature Neurosci.*, **9**, 824-831 (2006).

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