

## Product Information

### Anti-Tryptophan Hydroxylase antibody, Mouse monoclonal clone WH-3, purified from hybridoma cell culture

Product Number **SAB4200723**

#### Product Description

Anti-Tryptophan Hydroxylase antibody, Mouse monoclonal (mouse IgG3 isotype) is derived from the WH-3 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a BALB/c mouse immunized with recombinant rabbit Tryptophan Hydroxylase. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-Tryptophan Hydroxylase antibody recognizes human<sup>1-2</sup>, rabbit, mouse<sup>3</sup>, rat<sup>4</sup> and sheep<sup>5</sup> Tryptophan Hydroxylase. It is recommended to use in various immunochemical assays including Immunoblotting (~55 kDa), Immunohistochemistry<sup>6</sup> and Immunofluorescence.<sup>1</sup> Monoclonal Anti-Tryptophan Hydroxylase can be used with anti-SERT (Serotonin Transporter) antibodies for double-labeling of brain stem serotonergic neurons. Co-labeling was detected in the cell bodies of known serotonergic neurons and absent in the cell bodies of non-serotonergic neurons.<sup>7</sup>

Tryptophan Hydroxylase (TPH), also known as TpOH, TrpH or L-tryptophan tetrahydropteridine: oxygen oxidoreductase (EC 1.14.16.4), is a member of bipterin-dependent aromatic amino acid hydroxylases family, together with Tyrosine Hydroxylase and Phenylalanine Hydroxylase.<sup>8</sup> TPH is a rate-limiting tetramer enzyme in the synthetic pathway of neurotransmitter serotonin from L-tryptophan and is considered a key factor for the maintenance of normal serotonin transmission in the central nervous system.<sup>8</sup> High levels of TPH are detected in raphe nuclei of the brainstem and hypothalamus.<sup>9</sup> Furthermore, the distribution of TPH coincides with the distribution of serotonin, therefore the level of TPH is considered as an indirect measure of serotonin biosynthetic capacity.<sup>10</sup> In mammals, two isoforms of TPH are found, TPH1 (~51 kDa) presents primary in the gastric system and TPH2 (~55 kDa) found mainly in the brain.<sup>11</sup> Monoclonal Anti-Tryptophan Hydroxylase specifically recognizes both these isoforms.<sup>5,12-13</sup>

#### 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 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 is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

Immunoblotting: a working concentration of 2-4 µg/mL is recommended using rabbit pineal gland lysate.

**Note:** In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

#### References

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