

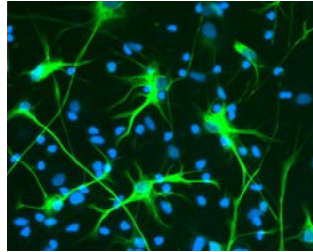
# PRODUCT INFORMATION

---

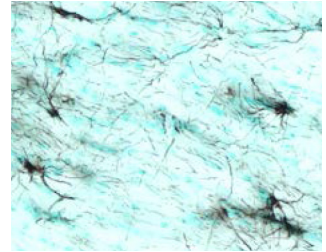
## STEM123™

Mouse Monoclonal Antibody Specific for Human GFAP

**Catalog Number:** Y40420  
**Size:** 50 µg  
**Volume:** 100 µL  
**Isotype:** IgG1  
**Form:** Unconjugated



STEM123 detects human GFAP<sup>+</sup> astrocytes differentiated from human neural stem cells *in vitro*.



STEM123 detects human GFAP<sup>+</sup> astrocytes differentiated from human neural stem cells transplanted into a mouse brain.

- 
- Specificity:** STEM123 reacts specifically with glial fibrillary acidic protein (GFAP) of human cells. GFAP is an intermediate-filament protein that is highly expressed in astrocytes and other cells of astroglial lineage. This antibody does not cross-react with brain tissue or extracts from mouse or rat.
- Preparation and Storage:** STEM123 is generated from cell culture supernatant in serum-free conditions and is purified by protein G chromatography. The antibody is stored in Phosphate Buffered Saline (pH 7.4) containing 0.02% sodium azide.  
Store at 2 - 8°C.
- Usage/Application:** STEM123 has been extensively used to identify astrocytes derived from human neural stem cells transplanted into mice and rats. *In vitro* and *in vivo* differentiation of human neural stem cells into astrocytes can be determined by immunohistochemistry (typically using a 1:1,000 dilution)<sup>1,2</sup> and immunofluorescence (typically using a 1:500 dilution)<sup>1,3</sup> using STEM123. It is recommended that the investigators determine optimal conditions for use of STEM123 in their own experiments.

### References:

1. Tamaki SJ, *et al.* Neuroprotection of host cells by human central nervous system stem cells in a mouse model of infantile neuronal ceroid lipofuscinosis. *Cell Stem Cell.* (2009) **5**: 310-319.
2. Salazar DL, *et al.* Human neural stem cells differentiate and promote locomotor recovery in an early chronic spinal cord injury NOD-scid mouse model. *PLoS ONE.* (2010) **5**: e12272.
3. Cummings BJ, *et al.* Human neural stem cells differentiate and promote locomotor recovery in spinal cord-injured mice. *PNAS.* (2005) **102**: 14069-14074.

STEM123 is a trademark of Takara Bio Inc.

#### Note

This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals. Also, do not use this product as food, cosmetic, or household item, etc. Takara products may not be resold or transferred, modified for resale or transfer, or used to manufacture commercial products without written approval from Takara Bio Inc. If you require licenses for other use, please contact us by phone at +81 77 565 6972 or from our website at [www.takara-bio.com](http://www.takara-bio.com). Your use of this product is also subject to compliance with any applicable licensing requirements described on the product web page. It is your responsibility to review, understand and adhere to any restrictions imposed by such statements. All trademarks are the property of their respective owners. Certain trademarks may not be registered in all jurisdictions.