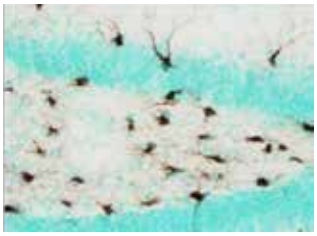
PRODUCT INFORMATION

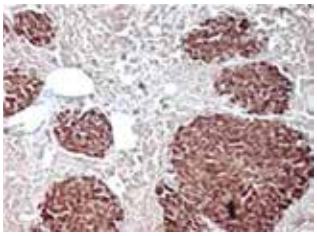
STEM121®

Mouse Monoclonal Antibody Specific for Human Cytoplasmic Marker

Catalog Number: Y40410
Size: 50 µg
Volume: 100 µL
Isotype: IgG1
Form: Unconjugated



STEM121 detects migration and differentiation of transplanted human neural stem cells in the hippocampus of a mouse brain.



STEM121 detects presence of transplanted human liver engrafting cells (hLEC™) in a mouse liver.

Specificity:

STEM121 reacts specifically with a cytoplasmic protein of human cells. This marker is expressed in cells from a variety of tissues including brain, liver and pancreas. However, it is expressed most highly in central nervous system (CNS) cells. This antibody does not cross-react with brain tissue or extracts from mouse, rat, or cynomologous monkey.

Preparation and Storage:

STEM121 is generated from cell culture supernatant in serum-free conditions and is purified by protein G chromatography. The antibody is supplied in Phosphate Buffered Saline (pH 7.4) containing 0.02% sodium azide.

Store at 2 - 8℃.

Usage/Application:

STEM121 has been extensively used to detect the engraftment, migration and differentiation of human cells transplanted into mice and rats. The antibody can be used to quantify the location and number of engrafted cells and the morphology of engrafted cells can be determined by immunohistochemistry using STEM121 (typically using a 1:1,000 dilution)[1, 2, 3, 4, 5] and immunofluorescence (typically using a 1:500 dilution)[1, 2, 3, 4, 5]. It is recommended that the investigators determine optimal conditions for use of STEM121 in their own experiments.

Takara Bio Inc. **http://www.takara-bio.com**
Takara Bio USA, Inc. **http://www.takarabio.com**

References:

1. Kelly S, *et al*. Transplanted human fetal neural stem cells survive, migrate, and differentiate in ischemic rat cerebral cortex. *PNAS*. (2004) **101**: 11839-11844.

2. Cummings BJ, *et al*. Human neural stem cells differentiate and promote locomotor recovery in spinal cord-injured mice. *PNAS*. (2005) **102**: 14069-14074.

3. 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.

4. Kallur T, *et al*. Human fetal cortical and striatal neural stem cells generate region-specific neurons *in vitro* and differentiate extensively to neurons after intrastriatal transplantation in neonatal rats. *J Neurosci Res*. (2006) **84**: 1630-1644.

5. 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.