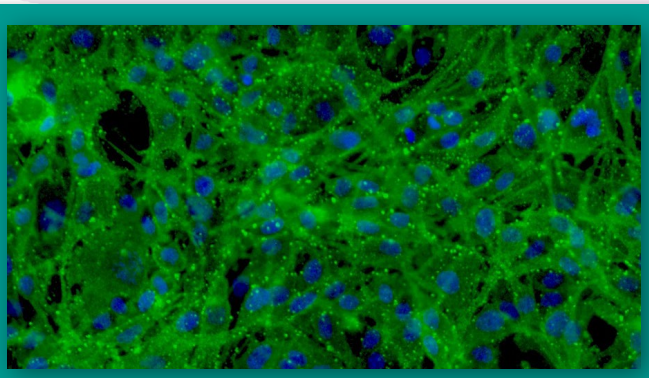
Rabbit anti-rat CD90/Thy-1 (MUB2058)

Nordic-MUbio is pleased to announce the release of one of the original antibodies (MUB2058) developed for the identification and characterisation of Thy-1 (CD90) in rats, used in some of the highly cited work of Barclay *et al*.

Thy-1 was initially discovered in 1964 by Reif and Allen, searching for antisera against mouse leukaemia cells. The antibodies they developed were found to strongly label thymocytes and peripheral T-cells, hence the name 'Thy-1'.

The discovery of the highly glycosylated and membrane anchored Thy-1 led to many other T-cell markers of considerable importance in immunology being discovered.

MUB2058 is one of the original antibodies developed for the identification and characterization of the Thy-1 molecule in rats.



Rat mesenchymal stem cells, from bone marrow immunostained for Thy-1

Thy-1 is an important marker frequently used for the identification of mesenchymal stem cells (MSCs).

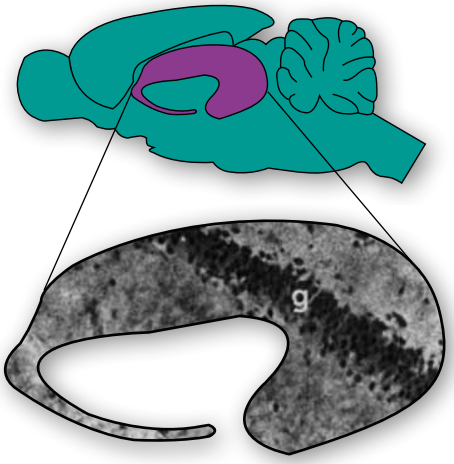
MSCs are a type of adult stem cell originally identified in the bone marrow stroma but have subsequently been described in other tissues.

MSCs can be differentiated *in vitro,* producing cell types including neural cells, adipocytes, chondrocytes and osteoblasts.

The rabbit polyclonal antibody MUB2058 recognises rat Thy-1, which, in rats, is expressed on several cell types including thymocytes, immature B-cells, neurons, mesenchymal stem cells and hematopoietic stem cells.

While the precise function of Thy-1 remains clouded, since its discovery Thy-1 has gone on to be characterised as important for, or implicated in, a wide range of cellular processes and roles, including:

- Identification of mesenchymal stem cells (MSCs)
- Adhesion of monocytes and leukocytes to endothelial cells and fibroblasts
- Axon growth regulation
- T-cell activation
- Apoptosis/Necrosis
- Tumour suppression
- Cell extravasation and migration



Strong Thy-1 immunostaining found in the layers surrounding the granular (g) and pyramidal neurons of the rat hippocampus (Barlcay *et al*, 1978)

References:

1. Barclay AN, Letarte-Muirhead M, Williams AF. (1975) Purification of the Thy-1 molecule from rat brain. Biochem J. 151:699-706.

2. Letarte-Muirhead M, Barclay AN, Williams AF. (1975) Purification of the Thy-1 molecule, a major cell surface glycoprotein of rat thymocytes. Biochem J. 151:685-97.

3. Barclay AN, Hydén H. (1978) Localization of the Thy-1 antigen in rat brain and spinal cord by immunofluorescence. J Neurochem. 31:1375-91.

4. Barclay AN. (1979) Localization of the Thy-1 antigen in the cerebellar cortex of rat brain by immunofluorescence during postnatal development. J Neurochem. 32:1249-57.

5. Barclay AN, Hydén H. (1979) Localization of the Thy-1 antigen by immunofluorescence on neurons isolated from rat brain. J Neurochem. 32:1583-86.

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