



DEVELOPMENTAL STUDIES HYBRIDOMA BANK

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FORSE-1

INVESTIGATOR

Name Paul H. Patterson
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IMMUNOGEN

Substance

Name NT2/D1 cells (human embryonal carcinoma cell line), differentiated w/retinoic acid
Origin gift of P.W. Andrews, The Wistar Institute of Anatomy and Biology
Chemical Composition membrane/cytoskeletal fraction
Developmental Stage cells were differentiated for 2 weeks with 10^{-5} M retinoic acid

IMMUNIZATION PROTOCOL

Donor Animal

Species mouse
Strain Balb/c
Sex female
Organ and tissue spleen

Immunization

Dates immunized D1, immunize and immunosuppress; D2, 3, suppress; D14, 23, boost
Amount of antigen 300 μ g initial + 300 μ g IP boost + 100 μ g intrasplenic boost
Route of immunization I.P.
Adjuvant RIBI + cyclophosphamide for immunosuppression + boost w/RIBI alone

FUSION

Date 7/20/91 (day 26 after initial immunization)

Myeloma cell line

Species mouse
Designation HL1-653

MONOCLONAL ANTIBODY

Isotype

IgM

Specificity

Cell binding yes, NT2/D1 cells and dissociated cells from E16 rat forebrain
Immunohistology embryonic rat, mouse, and chicken forebrain
Antibody competition no
Species Specificity mouse, rat, human, chicken (other species not tested)

ANTIGEN

Chemical properties

LeX carbohydrate on 1 chondroitin sulfate proteoglycan and 2 neutral glycolipids

Molecular weight

proteoglycan: greater than 200 kDa

Characterization

Immunoprecipitation yes
Immunoblotting yes
Purification no
Amino acid sequence analysis no

Functional effects

?

Immunohistochemistry

see references below for detailed immunohistochemistry of developing rat CNS

PUBLICATIONS :

- Tole, S., Kaprielian, Z., Ou, S.K., and Patterson, P.H. (1995). FORSE-1: a positionally regulated epitope in the developing rat central nervous system. *J. Neurosci.* 15(2), 957-969.
- Tole, S., and Patterson, P.H. (1995). Regionalization of the developing forebrain: a comparison of FORSE-1, Dlx-2, and BF-1. *J. Neurosci.* 15(2), 970-980.
- Young, H.E., Duplaa, C., Young T.M., Floyd, J.A., Reeves, M.L., Davis, K.H., Mancini, G.J., Eaton, M.E., Hill, J.D., Thomas, K., Austin, T., Edwards, C., Cuzzourt, J., Parikh, A., Groom, J., Hudson J., and Black, Jr., A.C. (2001). Clonogenic analysis reveals reserve stem cells in postnatal mammals: I. Pluripotent mesenchymal stem cells. *Anat. Rec.* 263, 350-360. (Continued)



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FORSE-1 (Continued)

- Young, H.E. (2004). Existence of reserve quiescent stem cells in adults, from amphibians to humans. *Curr. Top. Microbiol. Immunol.* 280, 71-109.
- Young, H.E., and Black, Jr., A.C. (2004). Adult stem cells. *Anat. Rec. Part A* 276A, 75-102.
- Sonntag, K.-C., Pruszek, J., Yoshizaki, T., Van Arensbergen, J., Sanchez-Pernaute, R., and Isacson, O. (2007). Enhanced yield of neuroepithelial precursors and midbrain-like dopaminergic neurons from human embryonic stem cells using the bone morphogenic protein antagonist Noggin. *Stem Cells* 25, 411-418.
- Pruszek, J., Sonntag, K.-C., Aung, M.H., Sanchez-Pernaute, R., and Isacson, O. (2007). Markers and methods for cell sorting of human embryonic stem cell-derived neural cell populations. *Stem Cells* 25, 2257-2268.

ACKNOWLEDGMENTS STATEMENT

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