# Technical Data Sheet Purified Mouse Anti-Mouse Doublecortin

| Product Information |  |
|---------------------|--|
| Material Number:    | 611706   |
| Size:               | 50 µg  |
| Concentration:      | 250 µg/ml  |
| Clone:              | 30/Doublecortin  |
| Immunogen:          | Mouse Doublecortin aa. 211-317   |
| Isotype:            | Mouse IgG1   |
| Reactivity:         | QC Testing: Mouse  |
| Target MW:          | 41 kDa   |
| Storage Buffer:     | Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09\%$ sodium azide |

### Description

The cerebral cortex is composed of multiple layers of neurons of distinct types and functions, which perform in unison to orchestrate cognitive function. The formation of the cortex relies on complex signaling mechanisms, which mediate the migration of newly formed neurons from deep within the brain to the superficial regions. Defects in neuronal migration and disruption of the multi-layered cortex are apparent in conditions such as X-linked lissencephaly (XLIS) and subcortical laminar heterotopia (SCLH) or "double cortex" (DC) syndrome. Mutations in the *doublecortin* gene have been linked to these brain disorders. Doublecortin is highly expressed in developing brain, primarily in migrating neurons. It is significantly homologous with the N-terminal region of the product of the *KIAA0369* gene, a protein that is also similar to the CaM kinase family in its C-terminal region. Doublecortin has four potential MAP kinase family phosphorylation sites and a putative site for Abl tyrosine phosphorylation. Thus, doublecortin is thought to be an integral component of tyrosine kinase signal transduction pathways that regulate neuronal migration and development of the cerebral cortex.



Western blot analysis of Doublecortin on a mouse neonate lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-mouse Doublecortin antibody.

#### Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

#### **Application Notes**

| Application |
|-------------|
|-------------|

| Western blot       | Routinely Tested          |
|--------------------|---------------------------|
| Immunofluorescence | Tested During Development |

### **Recommended Assay Procedure:**

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western\_Blotting.shtml

#### **BD Biosciences**

| bdbiosciences.c   | om   |   |   |   |   |
|---|--|---|---|---|---|
| United States<br>877.232.8995   | Canada<br>888.259.0187   | Europe<br>32.53.720.550   | Japan<br>0120.8555.90   | Asia Pacific<br>65.6861.0633  | Latin America/Caribbean<br>55.11.5185.9995  |
| For country-spe   | cific contact inf  | formation, visit  | bdbiosciences.co  | m/how to orde   | r/  |
| Conditions: The In<br>of any patents. BD<br>use of our product<br>product or as a co<br>written authorizat<br>For Research Use (<br>BD, BD Logo and a | Tormation disclose<br>0 Biosciences will ni<br>ts. Purchase does n<br>mponent of anoth<br>tion of Becton Dick<br>Only. Not for use in<br>all other trademark | a nerein is not to b<br>ot be held responsi<br>iot include or carry<br>er product. Any us<br>inson and Compan<br>o diagnostic or there<br>so are the property | e construed as a reco<br>ble for patent infrin<br>any right to resell ou<br>e of this product oth<br>y is strictly prohibite<br>apeutic procedures.<br>of Becton, Dickinsor | ommendation to Uso<br>gement or other vio<br>r transfer this produ<br>her than the permitt<br>d.<br>Not for resale.<br>h and Company. ©20 | e the above product in violation<br>lations that may occur with the<br>ct either as a stand-alone<br>ed use without the express<br>108 BD |

# **Suggested Companion Products**

| Catalog Number | Name                   | Size   | Clone  |
|----------------|------------------------|--------|--------|
| 554002         | HRP Goat Anti-Mouse Ig | 1.0 ml | (none) |

## **Product Notices**

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

### References

des Portes V, Pinard JM, Billuart P, et al. A novel CNS gene required for neuronal migration and involved in X-linked subcortical laminar heterotopia and lissencephaly syndrome. *Cell.* 1998; 92(1):51-61.(Biology)

Gleeson JG, Allen KM, Fox JW, et al. Doublecortin, a brain-specific gene mutated in human X-linked lissencephaly and double cortex syndrome, encodes a putative signaling protein. *Cell.* 1998; 92(1):63-72. (Biology)

Magavi SS, Leavitt BR, Macklis JD. Induction of neurogenesis in the neocortex of adult mice. Nature. 2000; 405(6789):951-955.(Biology)