

Product datasheet for **TA336855**

Doublecortin (DCX) Mouse Monoclonal Antibody [Clone ID: 3E1]

Product data:

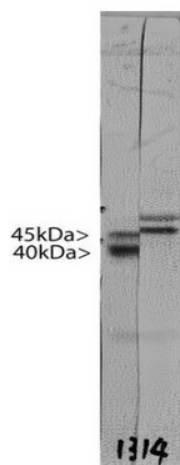
Product Type:	Primary Antibodies
Clone Name:	3E1
Applications:	IF, WB
Recommended Dilution:	WB: 1:5000-1:10000, IF: 1:500-1:1000
Reactivity:	Human, Mouse, Rat, Bovine, Porcine
Host:	Mouse
Isotype:	IgG2a, kappa
Clonality:	Monoclonal
Immunogen:	Recombinant full length human Lis-A isoform of Doublecortin purified from E. coli. [UniProt# O43602]
Formulation:	PBS containing 0.05% BSA, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Protein G purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	49.3 kDa
Gene Name:	doublecortin
Database Link:	NP_835365 Entrez Gene 13193 Mouse Entrez Gene 84394 Rat Entrez Gene 1641 Human O43602



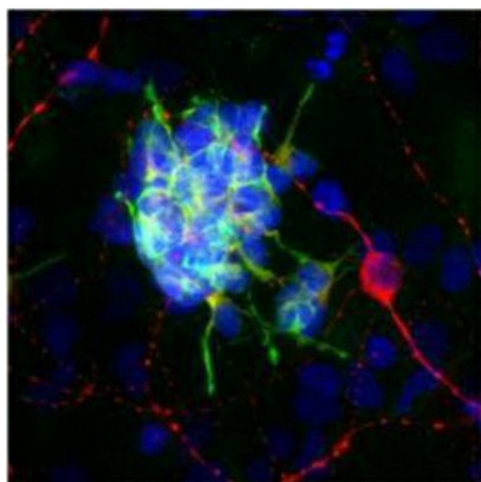
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Background:	<p>Doublecortin was originally discovered since defects in the gene encoding it are causative of X-linked lissencephaly, a rare group of brain malformations resulting in a smooth cerebral cortex caused by aberrant neuronal migration during development. The name Doublecortin comes from the unusual layering of the cortex in this form of lissencephaly, which appears to have a second deep cortical layer of neurons. This layer consists of neurons which did not migrate from the subventricular zone to the normal cortical layer. Patients with this defect suffer from seizures and mental retardation. The HGNC name for Doublecortin is DCX, and it is also known as Dublin, Lissencephalin-X, DBCN and Lis-X. Four proteins encoded by the DCX produce bands of about 35kDa and 45kDa on Western blots. The 45kDa form is known as Lis-XA while the smaller forms are generated by alternate transcription, are all missing the first 81 amino acids of Lis-XA, and are referred to as Lis-XB, Lis-XC, Lis-XD. There are minor amino acid sequence differences between these three smaller isoforms. All of these protein contain two so-called Doublecortin domains, each about 90 amino acids long, which are believed to function in binding to microtubules, a C-terminal serine and proline rich region which may become phosphorylated in vivo. The doublecortin protein appears to function as a microtubule and actin binding protein and may interact with Lis-1, a member of the beta-transducin or WD protein family, a protein mutations of which are also associated with lissencephaly. DCX is expressed very early in neuronal development, as neuroblasts become post-mitotic, but is lost as neurons mature. Developing neurons start to lose DCX expression about the time that they begin to express NeuN, a neuronal specific protein characteristic of more mature neurons, now known to correspond to the RNA binding protein Fox3. Antibodies to DCX are used to identify stem cells in sections and in tissue culture, and to see if neurogenesis is taking place.</p>
Synonyms:	DBCN; DC; LISX; SCLH; XLIS
Note:	This Doublecortin (3E1) antibody is useful for Immunocytochemistry/Immunofluorescence and Western blot, where bands can be seen at approximately 35 and 45 kDa.
Protein Families:	Druggable Genome

Product images:



Western Blot: Doublecortin Antibody (3E1) TA336855 - Western blot of crude rat brain extract from a postnatal 3 day animal stained with TA336855. Two bands at ~45kDa and ~35kDa show that TA336855 binds to an epitope in the region of Doublecortin shared



Immunocytochemistry/Immunofluorescence: Doublecortin Antibody (3E1) TA336855 - Rat brain neural cultures stained with TA336855 (green), a chicken polyclonal antibody to GFAP (NB300-213, red) and DNA (blue). The TA336855 antibody reveals strong cytoplasm