

# Data Sheet

## bcl-2 Oncoprotein

### mouse monoclonal antibody

## NCL-bcl-2

<b>Specificity</b>	Human bcl-2 oncoprotein.
<b>Clone</b>	bcl-2/100/D5
<b>Ig Class</b>	IgG1
<b>Antigen used for immunisations</b>	Synthetic peptide sequence (GAAPAPGIFSSQPGC- <sub>COOH</sub> ).
<b>Hybridoma partner</b>	Mouse myeloma (p3-NS1-Ag4-1).
<b>Preparation</b>	Lyophilised tissue culture supernatant containing 15mM sodium azide. Reconstitute with 1ml or 0.1ml of sterile distilled water as indicated on vial label.
<b>Effective on frozen tissue</b>	Yes
<b>Effective on paraffin wax embedded tissue</b>	Yes (using the high temperature antigen unmasking technique: see overleaf).
<b>Recommendations on use</b>	Immunohistochemistry: Typical working dilution 1:80. High temperature antigen unmasking technique. 60 minutes primary antibody incubation at 25°C. Standard ABC technique.  Western blotting: Typical working dilution 1:25 - 1:50.
<b>Positive controls</b>	Human tonsil
<b>Staining pattern</b>	Membrane and/or cytoplasmic
<b>Storage and stability</b>	Store unopened lyophilised antibody at 4°C. Under these conditions, there is no significant loss in product performance up to the expiry date indicated on the vial label. The reconstituted antibody is stable for at least two months when stored at 4°C. For long term storage, it is recommended that aliquots of the antibody are frozen at -20°C (frost-free freezers are <b>not</b> recommended). Repeated freezing and thawing must be avoided. Prepare working dilutions on the day of use.
<b>Legal consideration</b>	NCL-bcl-2 is recommended <b>FOR RESEARCH USE ONLY</b> .

#### Application

In 90 per cent of follicular lymphomas a translocation occurs which juxtaposes the bcl-2 gene at 18q21, to an immunoglobulin gene, with subsequent deregulation of protein synthesis and cell proliferation. The bcl-2 product is considered to act as an inhibitor of apoptosis. For this reason, bcl-2 expression is inhibited in germinal centres where apoptosis forms part of the B cell production pathway. This observation has turned out to have clinical implications. Distinction of follicular hyperplasia from follicular lymphoma is a common problem in histopathology. Reactive follicles show no staining for bcl-2, whereas the cells in neoplastic follicles exhibit membrane and/or cytoplasmic staining.

#### References

Takes R P, Baatenburg de Jong R J, Wijffels K, *et al.*. Expression of genetic markers in lymph node metastases compared with their primary tumours in head and neck cancer. *Journal of Pathology*. **194**: 298-302 (2001).

Tweddle D A, Malcolm A J, Cole M, *et al.*. p53 cellular localization and function in neuroblastoma. *American Journal of Pathology*. **158 (6)**: 2067-2077 (2001).

LeBrun D P, Kamel O W, Cleary M L, *et al.*. Follicular lymphomas of the gastrointestinal tract. Pathologic features in 31 cases and bcl-2 oncogenic protein expression. *American Journal of Pathology*. **140**: 1327-1335 (1992).

Liu Y J, Mason D Y, Johnson G D, *et al.*. Germinal center cells express bcl-2 protein after activation by signals which prevent their entry into apoptosis. *European Journal of Immunology*. **21**: 1905-1910 (1991).

Hockenbery D, Nunez G, Millman C, *et al.*. Bcl-2 is an inner mitochondrial membrane protein that blocks programmed cell death. *Nature*. **348**: 334-336 (1990).

Pezella F, Tse A G D, Cordell J L, *et al.*. Expression of the bcl-2 oncogene protein is not specific for the 14;18 chromosomal translocation. *American Journal of Pathology*. **137**: 225-232 (1990).

Tsujimoto Y and Croce C M. Analysis of the structure, transcripts, and protein products of bcl-2, the gene involved in human follicular lymphoma. *Proceedings of the National Academy of Science (USA)*. **83**: 5214-5218 (1986).

**Vertrieb:**

**LOXO GMBH, IMMUNBIOLOGIE - BIOCHEMIE, POSTFACH 1130, 69215 DOSSENHEIM**

**Telefon 06221 868023**

**Fax 06221 8680255**

**http://www.loxo.de**