More Than Antibodies

DB BIOTECH

RABBIT CLONAL
MONOSPECIFIC ANTIBODIES
WB, ELISA, IP, ICC
applications

MONOSPECIFIC SOLUTION for IHC-P DIAGNOSTICS
NEW QUALITY ON THE MARKET

DB Biotech is focused on the design and production of high quality rabbit clonal antibodies developed by a novel and proprietary in vitro cloning technology which has been developed and perfected by the DB Biotech scientific team. Our unique technology enables the preparation of a pure immunoglobulin fraction corresponding to a single clone of B lymphocytes.
The obtained immunoglobulin recognizes only one single linear epitope on the antigen molecule, making a DB Biotech antibody comparable in quality to its monoclonal analogue. In addition, the influence of the protein tertiary structure - frequently present in epitopes formed during production of monoclonal antibodies - is eliminated in the immunoglobulins corresponding to the clonal antibody. DB Biotech produced antibodies correspond strictly to the conserved linear epitope of the antigen molecule, yielding a higher-quality, more specific antibody with significantly better affinity and avidity.

ADVANTAGES OF DB BIOTECH RABBIT CLONAL ANTIBODIES:

- **Exceptional specificity** recognizing the corresponding antigen at the concentration of ≥ 5 ng
- **Highest sensitivity, affinity and avidity**
- **2 hours protocol –** no more overnight incubations
- **Background free blots**
- **Cost-effective dilutions**
- **SPECIAL FOCUS ON DIFFICULT TARGETS**

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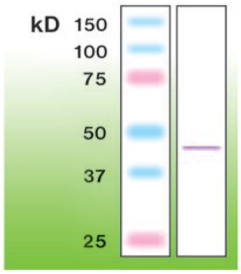
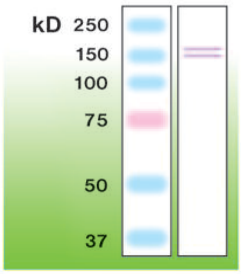
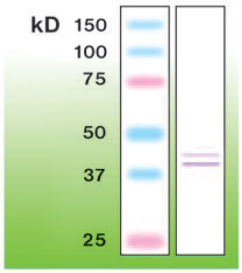


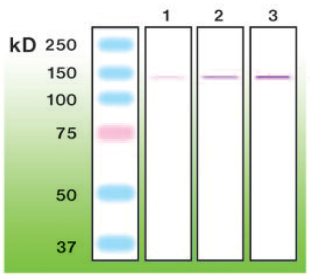
Anti-Actin (DB001)*
Western blot of actin in mouse brain crude lysate (50 µg of protein loaded).



Anti-iNOS (DB003)
Western blot of i[n]NOS in mouse brain crude lysate (50µg of protein loaded).



Anti-Erk 1,2 (DB012)
Western blot of Erk 1,2 in rat brain crude lysate (100µg of protein loaded).

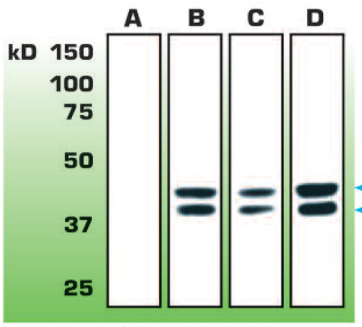


Anti-Nephrin (DB017)
Western blot analysis of mouse nephrin: lane 1 – 50ng; lane 2 – 100ng; lane 3 – 200ng of recombinant mouse nephrin (extracellular domain, Gln 37 – Thr 1049; cat. #: 3159/NN, R&D systems).

EXAMPLE OF OUR HIGH QUALITY PRODUCTS: ANTIBODIES TO PKC ISOFORMS

Specific detection of isoforms of one single protein with high homology of sequences, when associated with different cell signal transduction pathways, is often complicated. In some cases neither polyclonal nor monoclonal approach can produce specific antibodies characterizing the individual isoforms.

Clonal technology of DB Biotech has solved this problem and we have introduced 7 clonal antibodies recognizing very specifically **7 different PKC isoforms (e.g. distinguishing clearly PKC βI and PKC βII spliced isoforms** with a high sequence homology) which play a number of very important roles in cell signaling, including areas of investigation like cancer, diabetes, neurodegeneration or autoimmune disorders.



Anti-phospho-Erk 1,2 (DB013)
Western blot analysis of Erk 1,2 activation in untreated PC12 cells (A), cells treated with EGF-100ng/ml, 5min (B), PMA-100nM, 30min (C) in serum free DMEM, and EGF-100ng/ml, 5min with 10% FBS in DMEM (D). Wells were equally loaded with 50µg of whole cell lysate proteins/well.

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PRODUCT FORMAT

concentrated 100µl and 50µl
20ul TRIAL SIZE AVAILABLE

FAQs:

What is the difference between monoclonal and DB Biotech clonal antibodies?

Clonal antibodies are monospecific such as monoclonals. The principal difference between these two types of antibodies is that the DB Biotech clonal antibodies recognize solely very specifically selected linear epitope on the antigen molecule after its detailed proteomic analysis whereas the monoclonal antibodies recognize very often steric epitopes that frequently change their conformation during tissue preparation, protein extraction, etc., making the corresponding monoclonal antibody unspecific, less avid and in extreme cases not functional.

Are clonal antibodies similar to immunoaffinity purified polyclonals?

No. Immunoaffinity purified polyclonal antibodies (whether the immunogen is the whole protein or selected peptide) are always represented by numerous fractions of immunoglobulins corresponding to all epitopes in the immunogenic sequence. Rabbit clonal monospecific antibody is a homogenous fraction of immunoglobulin (IgG) corresponding exclusively to one and only specifically defined epitope on the antigen molecule.

PRODUCT LIST:

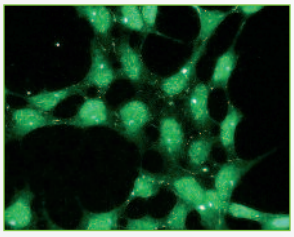
Catalogue #	
Anti - Akt1	DB 126
Anti - Akt1 (pSer-473)	DB 127
Anti - Akt2	DB 182
Anti - Akt2 (pSer-478)	DB 183
Anti - Akt3	DB 184
Anti - β-Actin	DB 001
Anti - Bax	DB 123
Anti - Bcl-2	DB 132
Anti - CD56/NCAM	DB 074
Anti - CD8	DB 086
Anti - c-FOS	DB 185
Anti - c-FOS	DB 186
Anti - CREB	DB 168
Anti - CTRP5	DB 018
Anti - CTRP7	DB 019
Anti - Cytokeratin 18	DB 233
Anti - Cytokeratin 19	DB 234
Anti - Erk 1,2	DB 012
Anti - iNOS	DB 003
Anti - Metallothionein	DB 014
Anti - Nephrin	DB 017
Anti - Nephrin	DB 024
Anti - p38-α	DB 161
Anti - p38-β	DB 162
Anti - p38-γ	DB 163
Anti - p38-δ	DB 164
Anti - p53	DB 002
Anti - p63/TP63	DB 133
Anti - Phospho-Erk 1,2	DB 013
Anti - PKC-α	DB 005
Anti - PKC-βI	DB 006
Anti - PKC-βII	DB 007
Anti - PKC-γ	DB 008
Anti - PKC-δ	DB 009
Anti - PKC-ε	DB 010
Anti - PKC-ζ	DB 011
Anti - Prion	DB 033
Anti - Prion	DB 080
Anti - Prion	DB 081
Anti - S-100	DB 232
Anti - Trypsin	DB 022
Anti - Trypsin	DB 023
Anti - TTF-1	DB 088
Products available on special request	
Anti-Interferon-γ	DB 004
Anti-proGRP	DB 020
Anti-proGRP	DB 021

Why does DB Biotech offer two separate clonal antibodies for the same antigen?

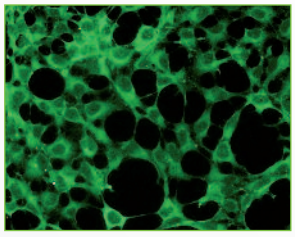
Some antigens have a number of specific linear epitopes that can be recognized by the corresponding clonal antibody with different level of intensity depending on the tested pathology, material, patient, etc. In such case DB Biotech develops 2-3 clonal antibodies characterizing different linear epitopes on the same antigen. We leave it to the clinician/scientist to test and select which clone is more appropriate for his/her researched model/application.

Why are there different clones of the same antibody for the application in research (western blot, immunoprecipitation, ELISA) and clinical diagnostic (IHC-P)?

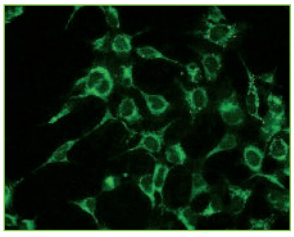
When designing the clonal antibody for IHC-P, the severe and irreversible denaturation of the antigen including the conformation of the corresponding epitope against which the clonal antibody is produced is taken into consideration. In most cases, the epitope for this application will be selected on different conformational criteria than for the western blot or ELISA application, where the original structure of the antigen is preserved or where the denaturation is considerably weaker. This is the reason why for most cases, different epitopes are designed for various applications and consequently different clonal antibodies are produced characterizing various epitopal sequences of the target protein molecule.



Representative picture of p53 expression in HEK293 cells, visualized with clonal rabbit anti-p53 (DB002) monospecific antibody.



Representative picture of Erk1,2 expression in HEK293 cells, visualized with clonal rabbit anti-Erk1,2 (DB012) monospecific antibody.



Representative picture of Bax expression in HEK293 cells, visualized with clonal rabbit anti-Bax (DB123) monospecific antibody.

ISO 13485 001 ISO 9001 001

To review our comprehensive panel for routine IHC diagnostics as well as our research WB ELISA, IP and FC line, please visit our website **www.dbbiotech.com**