abcam

# Animal Models & Veterinary Research

## Tackling key challenges in the life sciences with advanced biological tools

# Introduction

## Animal models

An animal model is an animal with a disease either the same as or like a disease in humans. Animal models are used to study the development and progression of diseases and to test new treatments before they are given to humans[1].

## Veterinary research

Veterinary research includes research on prevention, control, diagnosis, and treatment of diseases of animals and on the basic biology, welfare, and care of animals. Veterinary research transcends species boundaries and includes the study of spontaneously occurring and experimentally induced models of both human and animal disease and research at human-animal interfaces, such as food safety, wildlife and ecosystem health, zoonotic diseases, and public policy[2].

"*Between animal and human medicine there is no dividing line—nor should there be. The object is different but the experience obtained constitutes the basis of all medicine.*"

Rudolf Virchow (1821–1902)

References:
1. www.cancer.gov
2. National Research Council, Committee on the National Needs for Research in Veterinary Science

# Contents

# Animal models

# Fruit fly *(Drosophila melanogaster)*

Our catalogue has over 250 products to cover more than 100 antigens/proteins in drosophila research, including non-recombinant and recombinant primaries.

## Popularity of related targets

**68%** Histone H3

**54%** TNF Receptor I

**32%** VDAC1/Porin
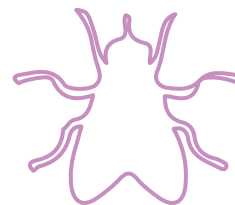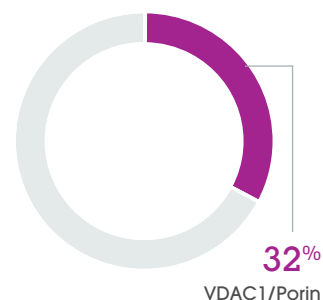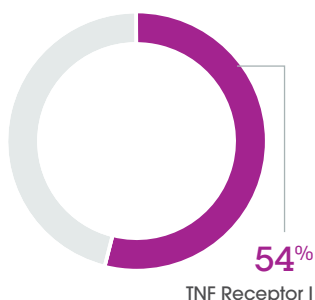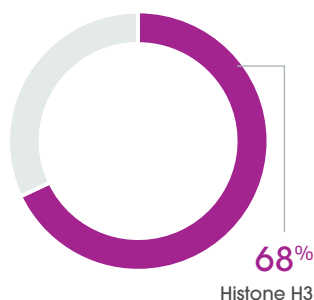
### Epigenetics

13% RNA polymerase II CTD repeat YSPTSPS
6% Histone H4
4% Fibrillarin
3% SC35

**Others:** Dnmt3a, Ago1, EIF2S1, Argonaute-2, MeCP2

### Immuno-Oncology

28% LC3A/B
10% LAMP1
7% Drosophila FMR1
1% Bad

### Neuroscience

29% Alpha-synuclein
15% Superoxide Dismutase 1
9% BACE1
6% Glutamine Synthetase

**Others:** alsha 1 Adrenergic Receptor/ADRA1, Ataxin 7, Tyrosine Hydroxylase, DCTN1/p150-glued

## Product highlights

| Name | Tested application | Cat. no. |
| --- | --- | --- |
| AMP1 antibody - Drosophila Lysosome Marker | ICC/IF, WB | ab30687 |
| Axons of the Drosophila CNS antibody | ICC, ICC/IF, IHC-Fr, IHC-FoFr, IHC-P | ab12455 |
| Drosophila FMR1 antibody | ELISA, ICC/IF, IP, WB | ab10299 |
| GM130 antibody - Drosophila Golgi/Cis-Golgi Marker | ICC/IF, WB | ab30637 |
| Rab5 antibody - Drosophila Early Endosome Marker | ICC/IF, WB | ab31261 |
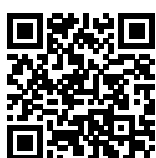
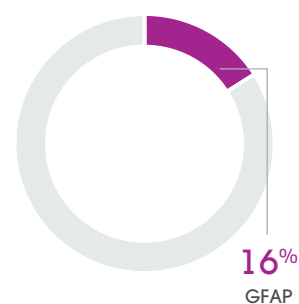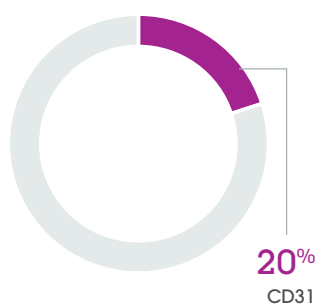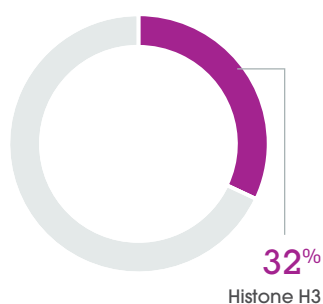Find more at **www.abcam.com/drosophila**

## Commonly used animal models

# Mouse *(Mus musculus)*

Our catalogue has over 25,000 products to cover more than 8,500 antigens/proteins in mouse research, including non-recombinant and recombinant primaries, secondaries, ELISA kits, proteins and peptides.

## Popularity of related targets



**32%** Histone H3

**20%** CD31

**16%** GFAP
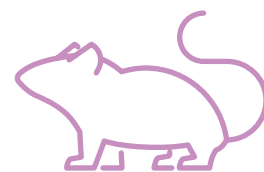
### Epigenetics

**21%** c-Myc
**8%** HMGB1
**6%** Oct4
**6%** HIF-1 alpha

**Others:** RNA polymerase II CTD repeat YSPTSPS, Nrf2, gamma H2A.X,

### Immuno-Oncology

**20%** alpha smooth muscle Actin
**16%** Collagen I
**9%** LAMP1
**7%** VEGFA

**Others:** CD3, Mannose Receptor, VEGFA, iNOS, LC3B

### Neuroscience

**15%** MAP2
**13%** Iba1
**12%** Ctip2
**10%** Doublecortin

**Others:** beta III Tubulin, CTGF, Tyrosine Hydroxylase, TBR1, activated Notch1

## Hot Antibody Sampler Panels

| Cat. no. | Panel name | Component cat. no. | Size | Components | Tested applications |
|---|---|---|---|---|---|
| ab107156 | Embryonic Stem Cell Marker – Mouse | ab16285 | 1 x 50µl | Anti-SSEA1 antibody (MC-480) | Flow Cyt,ICC/IF,IHC-FrFl,IHC-P,IHC-FoFr,IP |
| | | ab19857 | 1 x 50µg | Anti-Oct4 antibody - ChIP Grade | ChIP,CHIPseq,Flow Cyt,ICC/IF,IP,WB |
| | | ab80892 | 1 x 50µl | Anti-Nanog antibody | Flow Cyt,IHC - Wmt,ICC,ICC/IF,IHC-P,WB |
| | | ab97959 | 1 x 50µg | Anti-SOX2 antibody | IHC-Wmt,ICC/IF,IHC-P,IHC-Fr,IP,WB |
| ab254015 | Fibroblast Marker - Human, Mouse | ab109117 | 2 x 10µl | Anti-Hsp47 antibody (EPR4217) KO VALIDATED | IHC-P,WB |
| | | ab197896 | 2 x 10µl | Anti-S100A4 antibody (EPR14639(2)) KO VALIDATED | Flow Cyt,ICC/IF,IHC-P,IP,WB |
| | | ab32575 | 2 x 10µl | Anti-alpha smooth muscle Actin antibody(E184) | Flow Cyt,ICC/IF,IHC-FrFl,IHC-P,IHC-Fr,WB |
| | | ab92547 | 2 x 10µl | Anti-Vimentin antibody (EPR3776) - Cytoskeleton Marker KO VALIDATED | Flow Cyt,ICC/IF,IHC-P,IHC-Fr,WB |
| ab254026 | Mature Oligodendro-ocyte Marker - Human, Mouse | ab155279 | 2 x 10µl | Anti-SOX10 antibody (EPR4007) | Flow Cyt,ICC/IF,WB |
| | | ab227680 | 2 x 10µl | Anti-SOX10 antibody (SP267) | Flow Cyt,ICC/IF,IHC-P,WB |
| | | ab218011 | 2 x 10µl | Anti-Myelin Basic Protein antibody (EPR21188) | IHC-P,IHC-Fr, WB |
| | | ab109186 | 2 x 10µl | Anti-Olig2 antibody (EPR2673) | IHC-P,IHC-Fr, WB |
| | | ab109746 | 2 x 10µl | Anti-Myelin oligodendrocyte glycoprotein antibody (EP4281) | IHC-P,WB |
| ab254025 | Plasma Membrane Marker-Human, Mouse | ab76020 | 2 x 10µl | Anti-Sodium Potassium ATPase antibody (EP1845Y) - Plasma Membrane Loading Control | Flow Cyt,ICC/IF,IHC-P,WB |
| | | ab190355 | 2 x 10µl | Anti-PMCA1 antibody (EPR12029) | IHC-P,WB |
| | | ab22744 | 2 x 10µg | Anti-pan Cadherin antibody (mAbcam22744) | Flow Cyt,ICC/IF,IHC-P,WB |
| | | ab7671 | 2 x 10µg | Anti-alpha 1 Sodium Potassium ATPase antibody (464.6) - Plasma Membrane Marker | Flow Cyt,ICC/IF,IHC-P,WB |
| | | ab51034 | 2 x 10µl | Anti-pan Cadherin antibody (EPR1792Y) - Intercellular Junction Marker | Flow Cyt,ICC/IF,IHC-P,IP,WB |

Find more at **www.abcam.com/mouse**

# Nematode worm (*Caenorhabditis elegans*)

Our catalogue has over 80 products to cover more than 30 antigens/proteins in drosophila research, including non-recombinant and recombinant primaries.

## Popularity of related targets

**78%**
Histone H3

**100%**
beta Tubulin
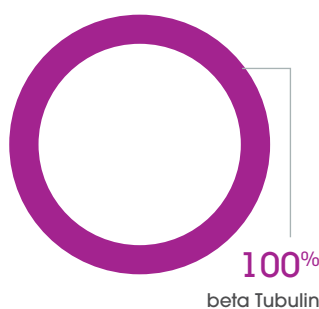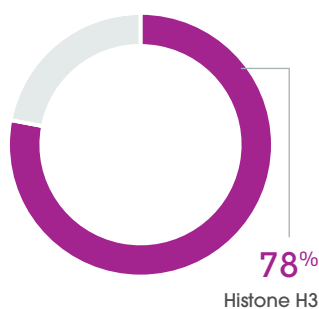
### Epigenetics

15% RNA polymerase II CTD repeat YSPTSPS

4% Fibrillarin

2% Histone H4

**Others:** RPS6,SIRT3

### Immuno-Oncology

## Product highlights

| Name | Tested application | Cat. no. |
| --- | --- | --- |
| C. elegans SNAP25 protein | SDS-PAGE | ab51291 |
| Histone H3 (tri methyl K4) antibody | ChIP, CHIPseq, ChIP/Chip, Flow Cyt, ICC, ICC/IF, IHC-Fr, IHC-P, IP, PepArr, WB | ab8580 |
| Histone H3 (di methyl K9) antibody | ChIP, ELISA, Flow Cyt, ICC/IF, IHC-Fr, IHC-P, IP, WB | ab1220 |
| PRG1 antibody | WB | ab15826 |
| RNA polymerase II CTD repeat YSPTSPS (phospho S2) antibody | ChIP, CHIPseq, ChIP/Chip, Dot blot, ELISA, ICC/IF, IHC-FoFr, IHC-Fr, IHC-P, IHC - Wholemount, WB | ab5095 |

Find more at **www.abcam.com/worm**

## Commonly used animal models

# Zebrafish *(Danio rerio)*

Our catalogue has over 400 products to cover more than 300 antigens/proteins in drosophila research, including non-recombinant and recombinant primaries, proteins and peptides.
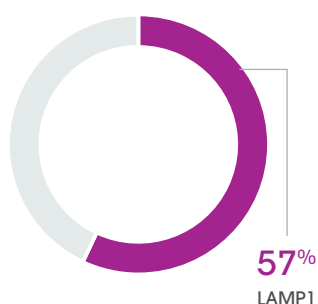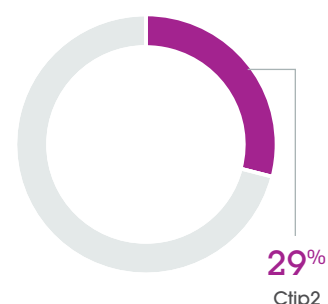
## Popularity of related targets



**62%** Histone H3

**57%** LAMP1

**29%** Ctip2
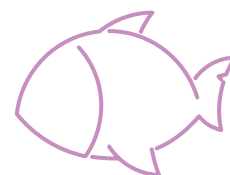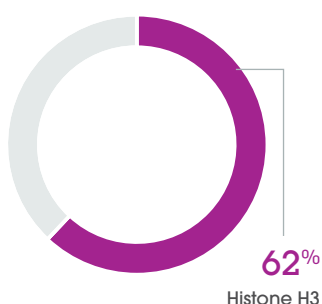
### Epigenetics

12% RNA polymerase II CTD repeat YSPTSPS
5% Histone H2A.Z
5% Bmi1
4% Dnmt1

**Others:** Argonaute-2, Fibrillarin, Ctip1/BCL-11A, GATA2, HIF1 beta, SMAD1/5/9

### Immuno-Oncology

32% LC3B
7% alpha smooth muscle Actin
3% Lactate Dehydrogenase

**Others:** EGFR, Collagen I

### Neuroscience

13% PSD95
10% GFAP
10% PSD95
10% VDAC1/Porin

**Others:** PGP9.5, EAAT1, Rhodopsin, Tau, BLBP

## Product highlights

| Name | Tested application | Cat. no. |
|---|---|---|
| Zebrafish Basement Membrane From Intestinal Epithelial antibody | ICC/IF, IP, WB | ab71312 |
| Zebrafish DeltaD antibody | ELISA, Flow Cyt, ICC/IF, IHC-Fr, IHC - Wholemount, WB | ab73331 |
| Zebrafish Gut Secretory Cell Epitopes antibody | ELISA, ICC, ICC/IF, IHC-P, IHC - Wholemount, IP, WB | ab71286 |
| Zebrafish Gut Absorptive Cell Epitopes antibody | ICC/IF, IHC - Wholemount, IP, WB | ab73643 |
| Zebrafish Posterior Intestinal Goblet Cells antibody | ICC/IF, WB | ab71508 |
| Zebrafish p53 antibody | IHC-P, WB | ab77813 |

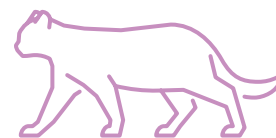Find more at **www.abcam.com/zebrafish1**
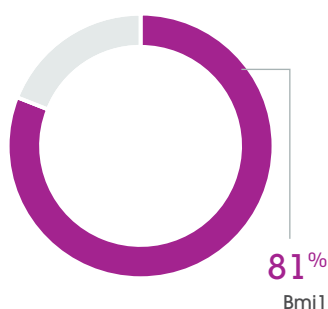
# Veterinary research

**Veterinary research**

# Cat <sup>(*feline*)</sup>

Our catalogue has over 180 products to cover more than 100 antigens/proteins in feline research, including non-recombinant and recombinant primaries, secondaries, ELISA kits, proteins and peptides.
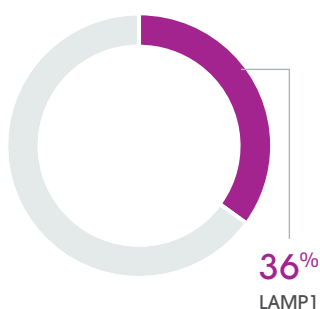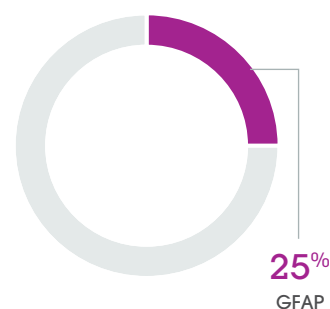
## Popularity of related targets



**81%** Bmi1

**36%** LAMP1

**25%** GFAP

### Epigenetics

**18%** PAX8
**1%** Myogenin

### Immuno-Oncology

**28%** SOX2
**24%** Collagen I
**7%** HLA Class I
**3%** alpha 1 Fetoprotein

**Others:** FOXP3, CD14, CD134/ OX40L receptor, CXCL9, MRP8 + MRP14, IL-1 alpha

### Neuroscience

**15%** Doublecortin
**14%** NeuN
**12%** beta III Tubulin
**10%** Tyrosine Hydroxylase

**Others:** VDAC1/Porin, MAP2, Neurofilament heavy polypeptide, GAD65 + GAD67, 160 kD Neurofilament Medium

## Product highlights

| Name | Tested application / Assay type | Cat. no. |
| --- | --- | --- |
| Feline Calicivirus | ELISA, IHC-P, WB | ab33990 |
| Feline Cytokine Antibody Array | Quantitative | ab197414 |
| Feline immunodeficiency virus antibody | ELISA, Flow Cyt, ICC/IF, IHC-Fr, WB | ab65289 |
| Feline IL-8 antibody | Sandwich (quantitative) | ab193688 |
| Feline Leukemia antibody | ELISA, IP, RIA | ab116669 |
| Leptospira biflexa antibody | Conjugation, ICC/IF | ab20110 |
| Toxoplasma gondii antibody | ELISA, ICC/IF, WB | ab8313 |

Find more at **www.abcam.com/cat**

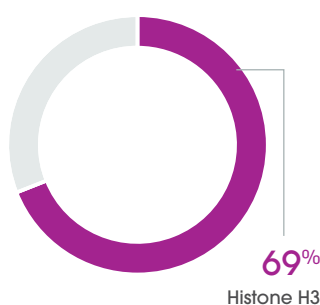## Veterinary research

# Dog *(canine)*

Our catalogue has over 750 products to cover more than 500 antigens/proteins in mouse research, including non-recombinant and recombinant primaries, secondaries, ELISA kits, proteins and peptides.
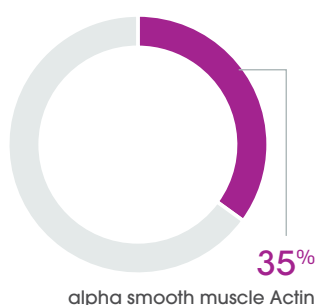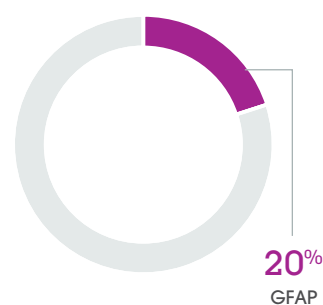
## Popularity of related targets

**69%** Histone H3

**35%** alpha smooth muscle Actin

**20%** GFAP
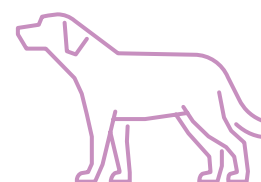
### Epigenetics

8% p53
7% gamma H2A.X
3% RUNX2
3% Lamin A + Lamin C
3% Lamin A
**Others:** SIRT1, Prohibitin, HDAC2, KAT2B/PCAF

### Immuno-Oncology

15% LAMP1
10% Collagen I
9% VEGFA
9% LC3B
**Others:** Heme Oxygenase 1, Fibroblast activation prot, L-17, EpCAM, TNF Receptor I

### Neuroscience

19% MAP2
16% Iba1
10% beta III Tubulin
7% VDAC1/Porin
**Others:** NeuN, beta III Tubulin, Dystrophin, VDAC1/Porin, Myelin Basic Protein

## Product highlights

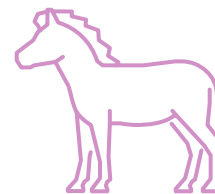| Name | Tested application / Assay type | Cat. no. |
| --- | --- | --- |
| Canine Cytokine Antibody Array | Quantitative | ab197411 |
| Canine coronavirus protein | ELISA | ab270828 |
| Canine Heartworm antibody | ICC/IF, IP, Sandwich ELISA, WB | ab193773 |
| Canine Osteopontin ELISA kit | Sandwich (quantitative) | ab205077 |
| Canine papillomavirus 2 E7 antibody | ELISA, WB | ab93703 |
| Human Anti-Toxocara canis IgG ELISA Kit | Indirect ELISA | ab108775 |
| Rabies Virus Glycoprotein antibody (1C5) | ICC/IF, Indirect ELISA | ab82460 |

Find more at **www.abcam.com/dog**

**Veterinary research**

# Horse (*equine*)

Our catalogue has over 80 products to cover more than 50 antigens/proteins in equine research, including non-recombinant and recombinant primaries, secondaries, ELISA kits, proteins and peptides.
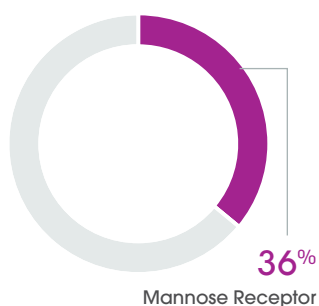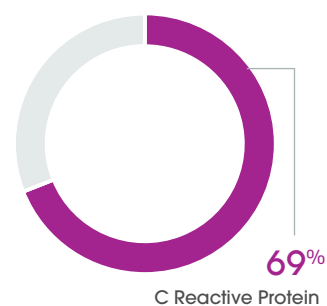
## Popularity of related targets

**53%**
Estrogen Receptor beta 1

**36%**
Mannose Receptor

**69%**
C Reactive Protein
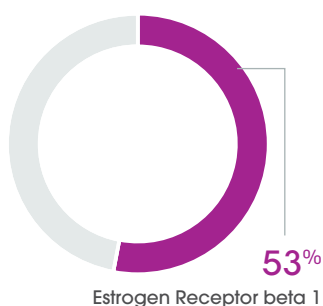
### Epigenetics

21% Estrogen Receptor beta
15% Cyclin T1
11% Estrogen Receptor beta

### Immuno-Oncology

35% EGFR
26% alpha smooth muscle Actin
**Others:** EGFR, Carbonic, Anhydrase 9/CA9, CD11 + CD18

### Neuroscience

29% E Cadherin
**Others:** TRPV4, Ryanodine Receptor

## Product highlights

| Name | Tested application / Assay type | Cat. no. |
|---|---|---|
| Equine Cytokine Antibody Array (10 Targets) | Quantitative | ab197413 |
| Equine IL-10 ELISA Kit | Sandwich (quantitative) | ab155466 |
| Horse Resistin ELISA kit | Sandwich (quantitative) | ab272031 |
| Recombinant Eastern Equine Encephalitis Virus E3E2 protein (His tag) | ELISA, SDS-PAGE, WB | ab230255 |
| West Nile Virus M glycoprotein antibody | ICC/IF, IHC-P, WB | ab22070 |

Find more at **www.abcam.com/horse**

# Pig *(porcine)*

Our catalogue has over 1300 products to cover more than 850 antigens/proteins in porcine research, including non-recombinant and recombinant primaries, secondaries, ELISA kits, proteins and peptides.

## Popularity of related targets

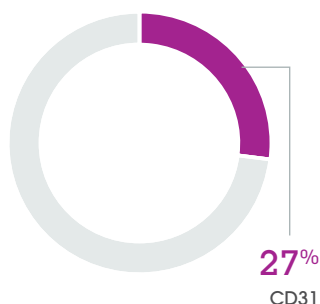**50%** Histone H3

**27%** CD31

**21%** Iba1
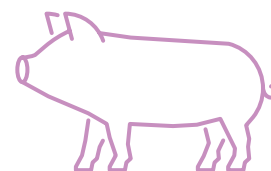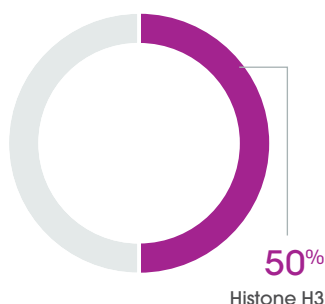
### Epigenetics

9% DDX4/MVH
8% gamma H2A.X
8% KDM1/LSD1
7% HIF-1 alpha
**Others:** Aurora B, Oct4, Estrogen Receptor beta, SREBP1, Myogenin
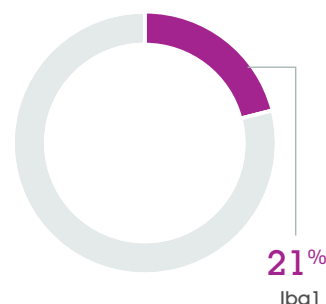
### Immuno-Oncology

26% alpha smooth muscle Actin
22% Collagen I
9% CD3
6% TGF beta 1
**Others:** TNF Receptor I, eNOS, Procollagen Type 1, TGF beta Receptor II, Angiopoietin 1

### Neuroscience

19% Ctip2
13% beta III Tubulin
10% Tyrosine Hydroxylase
9% VDAC1/Porin
**Others:** NeuN, Myelin Basic Protein, PGP9.5, Neurofilament heavy polypeptide, Superoxide dismutase

## Product highlights

| Name | Tested application / Assay type | Cat. no. |
| --- | --- | --- |
| Parvovirus antibody (CPV1-2A1) | ELISA, ICC/IF, IHC-P, WB | ab140431 |
| Porcine circovirus antibody | IHC-P, WB | ab183908 |
| Porcine Cytokine Antibody Array A (10 Targets) | Quantitative | ab197479 |
| Porcine PDGF-BB ELISA kit | Sandwich (quantitative) | ab218297 |
| Porcine VEGF-A ELISA Kit | Sandwich (quantitative) | ab218298 |

Find more at **www.abcam.com/pig**

**Veterinary research**

# Primates

Our catalogue has over 850 products to cover more than 500 antigens/proteins in feline research, including non-recombinant and recombinant primaries, secondaries, ELISA kits, proteins and peptides.

## Popularity of related targets



**33%**
Histone H3
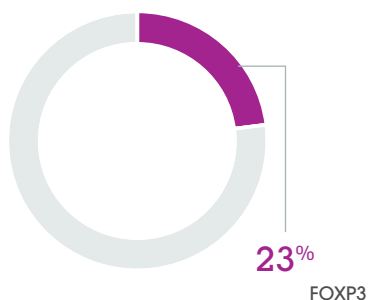
**23%**
FOXP3

**21%**
MAP2
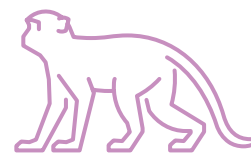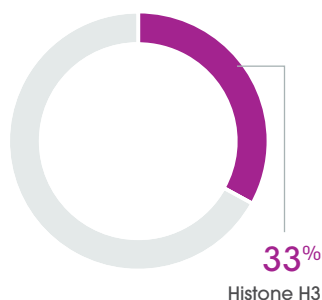
### Epigenetics

14% Oct4
10% RNA polymerase II CTD repeat YSPTSPS
8% p53
7% gamma H2A.X

**Others:** FEIF2S1, Nanog, HIF-1 alpha, Fibrillarin, Estrogen Receptor beta
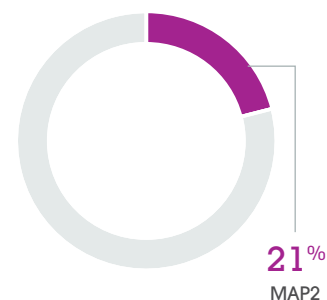
### Immuno-Oncology

21% LAMP1
14% Collagen I
8% CD31
7% Heme Oxygenase 1

**Others:** Fibroblast activation prot, Neuropilin 1, TNF Receptor I, CD8, CCR7

### Neuroscience

16% Ctip2
15% GFAP
13% Doublecortin
11% beta III Tubulin

**Others:** PSD95, Mitofusin 2, CNPase, Chromogranin A, Superoxide Dismutase 1

## Product highlights

| Name | Tested application / Assay type | Cat. no. |
|---|---|---|
| Campylobacter jejuni antibody (BGN/2E10) | ELISA, ICC/IF, IHC-Fr, IHC-P | ab54125 |
| Mycobacterium tuberculosis antibody | ICC/IF, IHC-Fr, IHC-P | ab905 |
| Non-Human Primate Cytokine Antibody Array (10 Targets) | Quantitative | ab197478 |
| Streptococcus pneumoniae antibody | ELISA, ICC/IF | ab20429 |

Find more at **www.abcam.com/primate**

## Veterinary research

# Sheep *(ovine)*

Our catalogue has over 360 products to cover more than 200 antigens/proteins in ovine research, including non-recombinant and recombinant primaries, secondaries, ELISA kits, proteins and peptides.
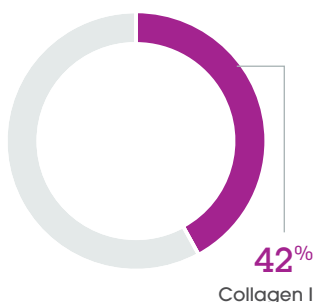
## Popularity of related targets

**35%**
Oct4

**42%**
Collagen I

**28%**
MAP2
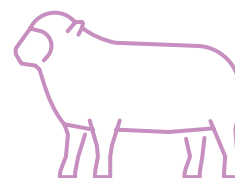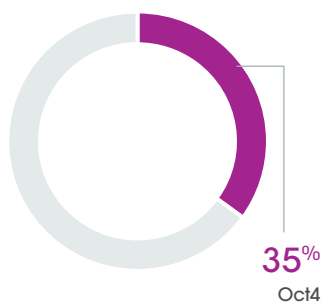
### Epigenetics

**20%** DDX4/MVH
**18%** gamma H2A.X
**8%** Lamin A + Lamin C
**8%** Estrogen Receptor beta

**Others:** PPAR delta, Progesterone Receptor, LXR alpha, Androgen Receptor, Estrogen Receptor beta 1, EIF2S1
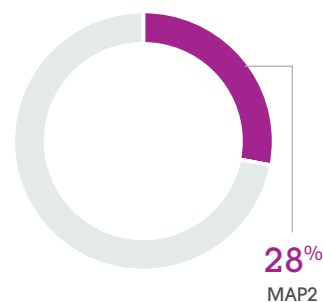
### Immuno-Oncology

**25%** alpha smooth muscle Actin
**15%** CD34
**6%** VEGF Receptor 2
**5%** TNF Receptor I

**Others:** TGF beta 1, VEGFA, CD1d, PGE2 receptor EP4 subtype, Angiopoietin 1

### Neuroscience

**17%** NeuN
**12%** CTGF
**10%** VDAC1/Porin
**7%** Myelin Basic Protein
**7%** PGP9.5

**Others:** Tau, Myelin Basic Protein, Superoxide Dismutase 1, VCP

## Product highlights
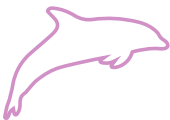
| Name | Tested application / Assay type | Cat. no. |
| --- | --- | --- |
| Listeria monocytogenes antibody | ELISA, ICC/IF, IHC-P, WB | ab35132 |
| Ovine MHC Class II DR antibody (37.68) | Flow Cyt, IHC-Fr, IP | ab34007 |
| Sheep IgG ELISA Kit | Sandwich (quantitative) | ab190546 |

Find more at **www.abcam.com/sheep**

# Other Species available

| Species | Name | Cat. no. |
|---|---|---|
| | Rabbit Anti-Bottlenose Dolphin IgG H&L secondary antibody (HRP) | ab112789 |
| | Recombinant Dolphin Interferon gamma protein | ab208961 |
| | Recombinant Bottlenose dolphin IL-1 alpha protein | ab117469 |
| | Recombinant Bottlenose dolphin IL-1RA protein | ab169729 |
| | Recombinant Dolphin TNF alpha protein | ab117237 |
| | Anti-p63 antibody (4A4) | ab735 |
| | Anti-CAMKIV antibody | ab3557 |
| | Anti-Cytokeratin 1 antibody (AE1) | ab9286 |
| | Anti-Acidic Cytokeratin antibody (AE-1) | ab187381 |
| | Anti-pan Cytokeratin antibody (AE-1) - BSA and Azide free | ab213135 |
| | Anti-Bovine Papilloma Virus E2 antibody (1E4) | ab980 |
| | Bovine Heart Mitochondria | ab110338 |
| | Bovine IgG ELISA Kit | ab205078 |
| | Bovine IL-2 ELISA Kit | ab193682 |
| | Bovine IL-6 ELISA Kit | ab205080 |
| | Anti-Cyclin B2/CCNB2 antibody (X29.2) | ab18250 |
| | Anti-DLL4 antibody | ab223029 |
| | Anti-GAP43 antibody - Neuronal Marker | ab12274 |
| | Anti-Histone H3 antibody - Nuclear Loading Control and ChIP Grade | ab1791 |
| | Recombinant X. laevis PKC alpha protein | ab60839 |
| | Recombinant X. laevis UBC4 protein (Active) | ab269097 |
| | Anti-Cardiac Troponin T antibody (1F11) | ab10214 |
| | Anti-GAP43 antibody - Neuronal Marker | ab12274 |
| | Anti-Plectin antibody - C-terminal | ab192706 |
| | Anti-Superoxide Dismutase 1 antibody | ab13498 |
| | Anti-VDAC1 / Porin antibody (20B12AF2) | ab14734 |
| | Native rabbit Thrombomodulin protein | ab88556 |
| | Rabbit C Reactive Protein (PTX1) ELISA Kit | ab157726 |
| | Rabbit Cytokine Antibody Array (10 Targets) | ab197459 |
| | Rabbit IgG ELISA Kit | ab187400 |
| | Recombinant rabbit TIGIT protein | ab224645 |

# Comparison sequence homology

If you are looking for an antibody and you cannot find a commercial one available for your protein target tested in your species of interest…This is for you!

Antibodies against a human protein usually recognises the homologous protein in other species like mouse, monkey, rat etc. This is due to the percentage of homology between both proteins. "Percent homology" is often used to mean "sequence similarity." The percentage of identical residues is a parameter commonly used to quantify the homology between proteins.

We consider that to have probabilities of cross-reactivity the homology between the immunogen and the protein target of interest should be higher than 85%. This is debatable based on antibody clonality. For polyclonals raised against large protein fragments, cross reaction at lower homologies is more likely than with monoclonals. Therefore we evaluate the percentage of homology and possibilities to success case by case.

If you are interested in using one of our antibodies. Please contact our Scientific Support team and we will check the homology for you. Also you can take part in our Abtrial program at www.abcam.com/abtrial-program.

## BLAST (Basic Local Alignment Search tools)

This program compares nucleotide or protein sequences to sequence databases and calculates the statistical significance. This helps you checking the homology between the immunogen and your target protein.

The program compares nucleotide or protein sequences to sequence databases and calculates the statistical significance



Use BLAST now

1. Copy here the immunogen sequence
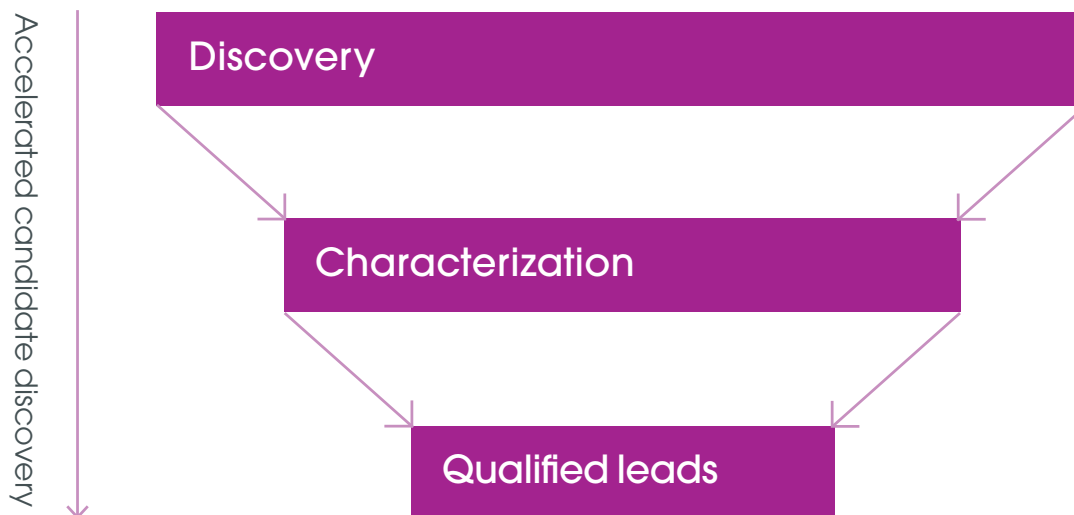2. Select your species of interest from the list
3. BLAST

# Custom antibody solutions

## For research and diagnostic development

### What we offer

Integrated platform to deliver fully characterized antibody candidates for therapeutic and diagnostic selection.

Accelerated candidate discovery

| Discovery |
| Characterization |
| Qualified leads |

Advantages:

- Flexible strategic approach
- Proven success in RUO and commercial markets
- IP protection
- Multiple antibody discovery platforms, including RabMAb® & RabMAb®-NGS technology and phage display platform.
- ISO 13485, ISO 9001 and GMP Quality Systems

We also offer custom antibody conjugation*, including:

- Alexa Fluor® dyes (405, 488, 555, 568, 594, 647, 680, 750, 790)
- FITC, HRP, Biotin, R-PE, APC, PerCP
- Oligo-conjugates for NanoString GeoMx™ Digital Spatial Profiler (DSP)

*Minimum 1mg

Explore FAQs of our custom solutions

Alexa Fluor® is a registered trademark of Life Technologies.

# RabMAb® and RabMAb®-NGS technology

Our RabMAb® technology combines the superior antigen recognition of the rabbit immune system with the specificity and consistency of a mouse monoclonal. High affinity, high specificity, high consistency. Fully harness the potential of our RabMAb technology with the power of next-generation sequencing (NGS).

| Benefits | RabMAb® | RabMAb®- NGS |
|---|---|---|
| **High affinity**<br>RabMAb® antibodies have high affinity and enhanced performance. | ✓ | ✓ |
| **Superior performance**<br>Unparalleled recognition of small epitopes, including post-translational modifications, small molecules, short peptides, point mutations, and conformational epitopes. | ✓ | ✓ |
| **Find unique binders**<br>With wider epitope recognition, we can generate a broader range of antibodies recognizing unique epitopes. | ✓ | ✓ |
| **Relevant species binding**<br>Rabbit offers options for human, NHP and mouse/rat cross reactivity, giving coverage of preferred species for project progression. | ✓ | ✓ |
| **Identify rare binders**<br>Even greater pool of candidates compared with traditional hybridoma method. Even better support of discovery efforts for functionally relevant diagnostic and therapeutic antibodies. | ✕ | ✓ |
| **Navigate challenging IP landscapes**<br>Provides a whole library of antibody sequences to support the resulting IP portfolio for legal protection around target binding. | ✕ | ✓ |
| **Complete bioinformatic support**<br>Proprietary bioinformatic support to permit rational clone selection and maximize lead discovery with both depth and breadth approaches. | ✕ | ✓ |

Seven FDA-approved companion diagnostic assays are created using our RabMAb® technology.

# Phage display platform

When it is not feasible to use animal systems, we turn to our proprietary in vitro phage display technology to generate recombinant antibodies, at speed.

Use phage display to generate antibodies against

- Toxins
- Infectious agents
- Low immunogenicity targets

Contact us at **www.abcam.com/custom-services**

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