

## Rabbit Clonal Antibodies

### Product Description

APS Ltd offers a range of rabbit clonal antibodies that have been designed for both clinical diagnostic and research applications. Rabbit clonal antibodies are developed by DB Biotech using a novel ***in-vitro* cloning technology** which enables the preparation of a pure immunoglobulin fraction corresponding to a single clone of B lymphocytes. The obtained immunoglobulin recognizes one single linear epitope on the antigen molecule, making this 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. As the clonal antibodies correspond strictly to the conserved linear epitope of the antigen molecule, the resulting antibody yields a higher-quality, more specific antibody with significantly better affinity and avidity.

Advantages of monospecific rabbit clonal antibodies:

- Exceptional specificity recognising the corresponding antigen at the concentration of  $\geq 5$  ng
- Highest sensitivity, affinity and avidity
- Reliability on any tissue
- Cost-effective dilutions
- Special focus on difficult targets
- Recognises only the specific linear epitope, not conformational as many monoclonal antibodies

### Product Options

- **Western Blot (WB), ELISA, Immunoprecipitation (IP) and Immunocytochemistry (ICC) applications for use in basic research**
  - 2 hour protocol – no need for overnight incubations
  - Background free blots
  - Exceptional dilutions
- **Immunohistochemistry-Paraffin embedded (IHC-P) applications for routine use in clinical pathologies**
  - Solution for problematic targets
  - Concentrated and ready-to-use formats
  - Minimum dilution 1:100 up to 1:1500
- **Flow cytometry**
  - FITC conjugated
  - Unconjugated form available

## Frequently asked questions (FAQs)

### **What is the difference between monoclonal and monospecific 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. In contrast, 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, non-functional.

### **What is the advantage of using rabbit clonal antibody produced from crude rabbit antiserum by *in vitro* cloning technology, when compared to monoclonal antibodies from hybridoma fusion cell lines?**

Outside of strictly specific linear epitopes characterisation, clonal antibodies are mature immunoglobulins (IgG), with the complete post translational modification of IgG molecule, mainly glycosylation, which plays an important role in stability of immunoglobulins. There are many reports in the literature describing the incomplete glycosylation patterns of monoclonal antibodies produced from hybridoma cell lines, which has an important influence on stability, affinity and avidity of antigen/antibody interactions.

### **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.

### **Why are clonal antibodies produced by original *in vitro* cloning technology exceptional?**

Clonal antibodies are exceptional because they recognize their target (epitope) with the highest affinity, avidity and specificity that remains unchanged even after the important changes in conformation of the antigen – such as denaturation during the fixation of the tissue, protein transfer in the case of western blot-related procedures, or as a consequence of the protein-protein interactions.

### **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 antibody is a homogenous fraction of immunoglobulin (IgG) corresponding exclusively to one and only specifically defined epitope on the antigen molecule.

## Product Information (for full Product Listing please see table below)

Product Code	Product Description	Pack size
APS-XXX-IHC-0.1	Antibodies for IHC – Concentrated	100 µl
APS-XXX-IHC-0.2	Antibodies for IHC – Concentrated	200 µl
APS-XXX-IHC-0.5	Antibodies for IHC – Concentrated	500 µl
APS-XXX-IHC-1	Antibodies for IHC – Concentrated	1 ml
APS-XXX-RTU-7	Antibodies for IHC – Ready-to-use	7 ml
APS-XXX-RTU-15	Antibodies for IHC – Ready-to-use	15 ml
APS-XXX-0.05	Antibodies for WB and ICC	50 µl
APS-XXX-0.1	Antibodies for WB and ICC	100 µl
APS-1XXX	FITC conjugated antibodies (10 µl for test)	100 Tests (1 ml)

NOTE: XXXX indicates the number used to identify the specific antibody clone. \*Antibodies can be supplied in liquid format, concentrated or pre-diluted ready-to-use. *Each product is supplied with a data sheet and protocol with detailed technical specifications and necessary information about proper use.*

## Presentation

**IHC-P** preparations are available as Concentrated and Ready-to-Use (RTU) formulations in a 20 mM Tris-HCl Buffer, pH 8.0 containing 20 mg/ml BSA and 0.05% Sodium Azide.

**Western Blot** preparations are available as a concentrated formulation in a 20 mM Tris-HCl Buffer, pH 8.0 containing 10 mg/ml BSA and 0.05% Sodium Azide.

**Flow Cytometry** preparations are supplied in aqueous buffer containing 10 mg/ml BSA and 0.05% Sodium Azide. The monospecific product was conjugated with FITC under optimal conditions. The solution is free of unconjugated FITC and unconjugated antibody.

## Shelf Life

Rabbit clonal antibodies have a shelf life of 24 months from the shipping date.

## Shipping

Antibodies are shipped on blue ice packs.

## Storage & Handling

For **IHC-P** preparations, recommended storage is +4°C. Do not freeze.

For **Western Blot** preparations, recommended storage is in 10 µl aliquots at -20°C.

For **FITC conjugated** preparations, we recommend storing undiluted at +4°C. Do not freeze. Protect from prolonged exposure to light.

## Precautions

The reagent contains sodium azide (NaN<sub>3</sub>) which is highly toxic in higher concentrations. The concentration in the reagent (0.05%) is not considered as hazardous. Disposal of waste material must be conducted in accordance with local regulations. Wear appropriate Personal Protective Equipment to avoid contact with eyes and skin.

## Product Listing

Product Code	Product Description	Volume	Application
APS-001 RTU-15	Anti-β-actin	15 ml	IHC Prediluted
APS-001 RTU-7	Anti-β-actin	7 ml	IHC Prediluted
APS-001-0.05	Anti-β-actin	50 μl	Western Blot
APS-001-0.1	Anti-β-actin	100 μl	Western Blot
APS-001-IHC-0.1	Anti-β-actin	100 μl	IHC concentrated
APS-001-IHC-0.2	Anti-β-actin	200 μl	IHC concentrated
APS-001-IHC-0.5	Anti-β-actin	500 μl	IHC concentrated
APS-001-IHC-1	Anti-β-actin	1 ml	IHC concentrated
APS-002-0.05	Anti-p53	50 μl	Western Blot
APS-002-0.1	Anti-p53	100 μl	Western Blot
APS-003 RTU-15	Anti-iNOS	15 ml	IHC Prediluted
APS-003 RTU-7	Anti-iNOS	7 ml	IHC Prediluted
APS-003-0.05	Anti-iNOS	50 μl	Western Blot
APS-003-0.1	Anti-iNOS	100 μl	Western Blot
APS-003-IHC-0.1	Anti-iNOS	100 μl	IHC concentrated
APS-003-IHC-0.2	Anti-iNOS	200 μl	IHC concentrated
APS-003-IHC-0.5	Anti-iNOS	500 μl	IHC concentrated
APS-003-IHC-1	Anti-iNOS	1 ml	IHC concentrated
APS-005-0.05	Anti-PKCα	50 μl	Western Blot
APS-005-0.1	Anti-PKCα	100 μl	Western Blot
APS-006-0.05	Anti-PKCβI	50 μl	Western Blot
APS-006-0.1	Anti-PKCβI	100 μl	Western Blot
APS-007-0.05	Anti-PKCβII	50 μl	Western Blot
APS-007-0.1	Anti-PKCβII	100 μl	Western Blot
APS-008-0.05	Anti-PKCγ	50 μl	Western Blot
APS-008-0.1	Anti-PKCγ	100 μl	Western Blot
APS-009-0.05	Anti-PKCδ	50 μl	Western Blot
APS-009-0.1	Anti-PKCδ	100 μl	Western Blot
APS-010-0.05	Anti-PKCε	50 μl	Western Blot
APS-010-0.1	Anti-PKCε	100 μl	Western Blot
APS-011-0.05	Anti-PKCζ	50 μl	Western Blot
APS-011-0.1	Anti-PKCζ	100 μl	Western Blot
APS-012-0.05	Anti-Erk 1,2	50 μl	Western Blot

APS-012-0.1	Anti-Erk 1,2	100 µl	Western Blot
APS-013-0.05	Anti-phospho - Erk 1,2	50 µl	Western Blot
APS-013-0.1	Anti-phospho - Erk 1,2	100 µl	Western Blot
APS-014-0.05	Anti-Metallothionein	50 µl	Western Blot
APS-014-0.1	Anti-Metallothionein	100 µl	Western Blot
APS-017-0.05	Anti-nephrin	50 µl	Western Blot
APS-017-0.1	Anti-nephrin	100 µl	Western Blot
APS-018-0.05	Anti-CTRP5 (adiponectin paralog; Complement C1q, Tumor necrosis factor α- Related Protein 5)	50 µl	Western Blot
APS-018-0.1	Anti-CTRP5 (adiponectin paralog; Complement C1q, Tumor necrosis factor α- Related Protein 5)	100 µl	Western Blot
APS-019-0.05	Anti-CTRP7 (adiponectin paralog; Complement C1q, Tumor necrosis factor α- Related Protein 7)	50 µl	Western Blot
APS-019-0.1	Anti-CTRP7 (adiponectin paralog; Complement C1q, Tumor necrosis factor α- Related Protein 7)	100 µl	Western Blot
APS-022-0.05	Anti-trypsin	50 µl	Western Blot
APS-022-0.1	Anti-trypsin	100 µl	Western Blot
APS-023-0.05	Anti-trypsin	50 µl	Western Blot
APS-023-0.1	Anti-trypsin	100 µl	Western Blot
APS-024-0.05	Anti-nephrin	50 µl	Western Blot
APS-024-0.1	Anti-nephrin	100 µl	Western Blot
APS-026 RTU-15	Anti-p53	15 ml	IHC Prediluted
APS-026 RTU-7	Anti-p53	7 ml	IHC Prediluted
APS-026-0.1	Anti-p53	100 µl	IHC concentrated
APS-026-0.2	Anti-p53	200 µl	IHC concentrated
APS-026-0.5	Anti-p53	500 µl	IHC concentrated
APS-026-1	Anti-p53	1 ml	IHC concentrated
APS-027 RTU-15	Anti-CD5	15 ml	IHC Prediluted
APS-027 RTU-7	Anti-CD5	7 ml	IHC Prediluted
APS-027-0.1	Anti-CD5	100 µl	IHC concentrated
APS-027-0.2	Anti-CD5	200 µl	IHC concentrated
APS-027-0.5	Anti-CD5	500 µl	IHC concentrated
APS-027-1	Anti-CD5	1 ml	IHC concentrated
APS-033-0.05	Anti-Prion	50 µl	Western Blot
APS-033-0.1	Anti-Prion	100 µl	Western Blot
APS-037 RTU-15	Anti-Human Kappa Light Chain	15 ml	IHC Prediluted
APS-037 RTU-7	Anti-Human Kappa Light Chain	7 ml	IHC Prediluted
APS-037-0.1	Anti-Human Kappa Light Chain	100 µl	IHC concentrated
APS-037-0.2	Anti-Human Kappa Light Chain	200 µl	IHC concentrated

APS-037-0.5	Anti-Human Kappa Light Chain	500 µl	IHC concentrated
APS-037-1	Anti-Human Kappa Light Chain	1 ml	IHC concentrated
APS-038 RTU-15	Anti-Human Kappa Light Chain	15 ml	IHC Prediluted
APS-038 RTU-7	Anti-Human Kappa Light Chain	7 ml	IHC Prediluted
APS-038-0.1	Anti-Human Kappa Light Chain	100 µl	IHC concentrated
APS-038-0.2	Anti-Human Kappa Light Chain	200 µl	IHC concentrated
APS-038-0.5	Anti-Human Kappa Light Chain	500 µl	IHC concentrated
APS-038-1	Anti-Human Kappa Light Chain	1 ml	IHC concentrated
APS-039 RTU-15	Anti-Human Lambda Light Chain	15 ml	IHC Prediluted
APS-039 RTU-7	Anti-Human Lambda Light Chain	7 ml	IHC Prediluted
APS-039-0.1	Anti-Human Lambda Light Chain	100 µl	IHC concentrated
APS-039-0.2	Anti-Human Lambda Light Chain	200 µl	IHC concentrated
APS-039-0.5	Anti-Human Lambda Light Chain	500 µl	IHC concentrated
APS-039-1	Anti-Human Lambda Light Chain	1 ml	IHC concentrated
APS-041 RTU-15	Anti-CD20	15 ml	IHC Prediluted
APS-041 RTU-7	Anti-CD20	7 ml	IHC Prediluted
APS-041-0.1	Anti-CD20	100 µl	IHC concentrated
APS-041-0.2	Anti-CD20	200 µl	IHC concentrated
APS-041-0.5	Anti-CD20	500 µl	IHC concentrated
APS-041-1	Anti-CD20	1 ml	IHC concentrated
APS-042 RTU-15	Anti-CD45	15 ml	IHC Prediluted
APS-042 RTU-7	Anti-CD45	7 ml	IHC Prediluted
APS-042-0.1	Anti-CD45	100 µl	IHC concentrated
APS-042-0.2	Anti-CD45	200 µl	IHC concentrated
APS-042-0.5	Anti-CD45	500 µl	IHC concentrated
APS-042-1	Anti-CD45	1 ml	IHC concentrated
APS-045 RTU-15	Anti-CD163	15 ml	IHC Prediluted
APS-045 RTU-7	Anti-CD163	7 ml	IHC Prediluted
APS-045-0.1	Anti-CD163	100 µl	IHC concentrated
APS-045-0.2	Anti-CD163	200 µl	IHC concentrated
APS-045-0.5	Anti-CD163	500 µl	IHC concentrated
APS-045-1	Anti-CD163	1 ml	IHC concentrated
APS-047 RTU-15	Anti-PLAP (Placental Alkaline Phosphatase)	15 ml	IHC Prediluted
APS-047 RTU-7	Anti-PLAP (Placental Alkaline Phosphatase)	7 ml	IHC Prediluted
APS-047-0.1	Anti-PLAP (Placental Alkaline Phosphatase)	100 µl	IHC concentrated
APS-047-0.2	Anti-PLAP (Placental Alkaline Phosphatase)	200 µl	IHC concentrated
APS-047-0.5	Anti-PLAP (Placental Alkaline Phosphatase)	500 µl	IHC concentrated
APS-047-1	Anti-PLAP (Placental Alkaline Phosphatase)	1 ml	IHC concentrated
APS-048 RTU-15	Anti-EMA (CD227, Mucin-1)	15 ml	IHC Prediluted
APS-048 RTU-7	Anti-EMA (CD227, Mucin-1)	7 ml	IHC Prediluted
APS-048-0.1	Anti-EMA (CD227, Mucin-1)	100 µl	IHC concentrated
APS-048-0.2	Anti-EMA (CD227, Mucin-1)	200 µl	IHC concentrated

APS-048-0.5	Anti-EMA (CD227, Mucin-1)	500 µl	IHC concentrated
APS-048-1	Anti-EMA (CD227, Mucin-1)	1 ml	IHC concentrated
APS-049 RTU-15	Anti-Melanosome	15 ml	IHC Prediluted
APS-049 RTU-7	Anti-Melanosome	7 ml	IHC Prediluted
APS-049-0.1	Anti-Melanosome	100 µl	IHC concentrated
APS-049-0.2	Anti-Melanosome	200 µl	IHC concentrated
APS-049-0.5	Anti-Melanosome	500 µl	IHC concentrated
APS-049-1	Anti-Melanosome	1 ml	IHC concentrated
APS-050 RTU-15	Anti-Melan A	15 ml	IHC Prediluted
APS-050 RTU-7	Anti-Melan A	7 ml	IHC Prediluted
APS-050-0.1	Anti-Melan A	100 µl	IHC concentrated
APS-050-0.2	Anti-Melan A	200 µl	IHC concentrated
APS-050-0.5	Anti-Melan A	500 µl	IHC concentrated
APS-050-1	Anti-Melan A	1 ml	IHC concentrated
APS-051 RTU-15	Anti-Cytokeratin 7	15 ml	IHC Prediluted
APS-051 RTU-7	Anti-Cytokeratin 7	7 ml	IHC Prediluted
APS-051-0.1	Anti-Cytokeratin 7	100 µl	IHC concentrated
APS-051-0.2	Anti-Cytokeratin 7	200 µl	IHC concentrated
APS-051-0.5	Anti-Cytokeratin 7	500 µl	IHC concentrated
APS-051-1	Anti-Cytokeratin 7	1 ml	IHC concentrated
APS-053 RTU-15	Anti-ER (Estrogen Receptor)	15 ml	IHC Prediluted
APS-053 RTU-7	Anti-ER (Estrogen Receptor)	7 ml	IHC Prediluted
APS-053-0.1	Anti-ER (Estrogen Receptor)	100 µl	IHC concentrated
APS-053-0.2	Anti-ER (Estrogen Receptor)	200 µl	IHC concentrated
APS-053-0.5	Anti-ER (Estrogen Receptor)	500 µl	IHC concentrated
APS-053-1	Anti-ER (Estrogen Receptor)	1 ml	IHC concentrated
APS-055 RTU-15	Anti-S-100	15 ml	IHC Prediluted
APS-055 RTU-7	Anti-S-100	7 ml	IHC Prediluted
APS-055-0.1	Anti-S-100	100 µl	IHC concentrated
APS-055-0.2	Anti-S-100	200 µl	IHC concentrated
APS-055-0.5	Anti-S-100	500 µl	IHC concentrated
APS-055-1	Anti-S-100	1 ml	IHC concentrated
APS-057 RTU-15	Anti-CD10	15 ml	IHC Prediluted
APS-057 RTU-7	Anti-CD10	7 ml	IHC Prediluted
APS-057-0.1	Anti-CD10	100 µl	IHC concentrated
APS-057-0.2	Anti-CD10	200 µl	IHC concentrated
APS-057-0.5	Anti-CD10	500 µl	IHC concentrated
APS-057-1	Anti-CD10	1 ml	IHC concentrated
APS-059 RTU-15	Anti-PR (Progesterone Receptor)	15 ml	IHC Prediluted
APS-059 RTU-7	Anti-PR (Progesterone Receptor)	7 ml	IHC Prediluted
APS-059-0.1	Anti-PR (Progesterone Receptor)	100 µl	IHC concentrated
APS-059-0.2	Anti-PR (Progesterone Receptor)	200 µl	IHC concentrated



APS-059-0.5	Anti-PR (Progesterone Receptor)	500 µl	IHC concentrated
APS-059-1	Anti-PR (Progesterone Receptor)	1 ml	IHC concentrated
APS-060 RTU-15	Anti-EBV/LMP-1	15 ml	IHC Prediluted
APS-060 RTU-7	Anti-EBV/LMP-1	7 ml	IHC Prediluted
APS-060-0.1	Anti-EBV/LMP-1	100 µl	IHC concentrated
APS-060-0.2	Anti-EBV/LMP-1	200 µl	IHC concentrated
APS-060-0.5	Anti-EBV/LMP-1	500 µl	IHC concentrated
APS-060-1	Anti-EBV/LMP-1	1 ml	IHC concentrated
APS-061 RTU-15	Anti-EBV/LMP-1	15 ml	IHC Prediluted
APS-061 RTU-7	Anti-EBV/LMP-1	7 ml	IHC Prediluted
APS-061-0.1	Anti-EBV/LMP-1	100 µl	IHC concentrated
APS-061-0.2	Anti-EBV/LMP-1	200 µl	IHC concentrated
APS-061-0.5	Anti-EBV/LMP-1	500 µl	IHC concentrated
APS-061-1	Anti-EBV/LMP-1	1 ml	IHC concentrated
APS-062 RTU-15	Anti-CD117	15 ml	IHC Prediluted
APS-062 RTU-7	Anti-CD117	7 ml	IHC Prediluted
APS-062-0.1	Anti-CD117	100 µl	IHC concentrated
APS-062-0.2	Anti-CD117	200 µl	IHC concentrated
APS-062-0.5	Anti-CD117	500 µl	IHC concentrated
APS-062-1	Anti-CD117	1 ml	IHC concentrated
APS-066 RTU-15	Anti-Cyclin D1	15 ml	IHC Prediluted
APS-066 RTU-7	Anti-Cyclin D1	7 ml	IHC Prediluted
APS-066-0.1	Anti-Cyclin D1	100 µl	IHC concentrated
APS-066-0.2	Anti-Cyclin D1	200 µl	IHC concentrated
APS-066-0.5	Anti-Cyclin D1	500 µl	IHC concentrated
APS-066-1	Anti-Cyclin D1	1 ml	IHC concentrated
APS-070 RTU-15	Anti-Ki-67	15 ml	IHC Prediluted
APS-070 RTU-7	Anti-Ki-67	7 ml	IHC Prediluted
APS-070-0.1	Anti-Ki-67	100 µl	IHC concentrated
APS-070-0.2	Anti-Ki-67	200 µl	IHC concentrated
APS-070-0.5	Anti-Ki-67	500 µl	IHC concentrated
APS-070-1	Anti-Ki-67	1 ml	IHC concentrated
APS-071 RTU-15	Anti-CD1a	15 ml	IHC Prediluted
APS-071 RTU-7	Anti-CD1a	7 ml	IHC Prediluted
APS-071-0.1	Anti-CD1a	100 µl	IHC concentrated
APS-071-0.2	Anti-CD1a	200 µl	IHC concentrated
APS-071-0.5	Anti-CD1a	500 µl	IHC concentrated
APS-071-1	Anti-CD1a	1 ml	IHC concentrated
APS-074-0.05	Anti-CD56/NCAM	50 µl	Western Blot
APS-074-0.1	Anti-CD56/NCAM	100 µl	Western Blot
APS-080-0.05	Anti-Prion	50 µl	Western Blot
APS-080-0.1	Anti-Prion	100 µl	Western Blot



APS-081-0.05	Anti-Prion	50 µl	Western Blot
APS-081-0.1	Anti-Prion	100 µl	Western Blot
APS-082 RTU-15	Anti-CD3	15 ml	IHC Prediluted
APS-082 RTU-7	Anti-CD3	7 ml	IHC Prediluted
APS-082-0.1	Anti-CD3	100 µl	IHC concentrated
APS-082-0.2	Anti-CD3	200 µl	IHC concentrated
APS-082-0.5	Anti-CD3	500 µl	IHC concentrated
APS-082-1	Anti-CD3	1 ml	IHC concentrated
APS-085 RTU-15	Anti-CD8	15 ml	IHC Prediluted
APS-085 RTU-7	Anti-CD8	7 ml	IHC Prediluted
APS-085-0.1	Anti-CD8	100 µl	IHC concentrated
APS-085-0.2	Anti-CD8	200 µl	IHC concentrated
APS-085-0.5	Anti-CD8	500 µl	IHC concentrated
APS-085-1	Anti-CD8	1 ml	IHC concentrated
APS-086-0.05	Anti-CD8	50 µl	Western Blot
APS-086-0.1	Anti-CD8	100 µl	Western Blot
APS-088-0.05	Anti-TTF-1	50 µl	Western Blot
APS-088-0.1	Anti-TTF-1	100 µl	Western Blot
APS-089 RTU-15	Anti-TTF-1	15 ml	IHC Prediluted
APS-089 RTU-7	Anti-TTF-1	7 ml	IHC Prediluted
APS-089-0.1	Anti-TTF-1	100 µl	IHC concentrated
APS-089-0.2	Anti-TTF-1	200 µl	IHC concentrated
APS-089-0.5	Anti-TTF-1	500 µl	IHC concentrated
APS-089-1	Anti-TTF-1	1 ml	IHC concentrated
APS-092 RTU-15	Anti-EGFR	15 ml	IHC Prediluted
APS-092 RTU-7	Anti-EGFR	7 ml	IHC Prediluted
APS-092-0.1	Anti-EGFR	100 µl	IHC concentrated
APS-092-0.2	Anti-EGFR	200 µl	IHC concentrated
APS-092-0.5	Anti-EGFR	500 µl	IHC concentrated
APS-092-1	Anti-EGFR	1 ml	IHC concentrated
APS-094 RTU-15	Anti-Cerb-2	15 ml	IHC Prediluted
APS-094 RTU-7	Anti-Cerb-2	7 ml	IHC Prediluted
APS-094-0.1	Anti-Cerb-2	100 µl	IHC concentrated
APS-094-0.2	Anti-Cerb-2	200 µl	IHC concentrated
APS-094-0.5	Anti-Cerb-2	500 µl	IHC concentrated
APS-094-1	Anti-Cerb-2	1 ml	IHC concentrated
APS-097 RTU-15	Anti-Cytokeratin 5/6	15 ml	IHC Prediluted
APS-097 RTU-7	Anti-Cytokeratin 5/6	7 ml	IHC Prediluted
APS-097-0.1	Anti-Cytokeratin 5/6	100 µl	IHC concentrated
APS-097-0.2	Anti-Cytokeratin 5/6	200 µl	IHC concentrated
APS-097-0.5	Anti-Cytokeratin 5/6	500 µl	IHC concentrated
APS-097-1	Anti-Cytokeratin 5/6	1 ml	IHC concentrated

APS-098 RTU-15	Anti-Cytokeratin 8	15 ml	IHC Prediluted
APS-098 RTU-7	Anti-Cytokeratin 8	7 ml	IHC Prediluted
APS-098-0.1	Anti-Cytokeratin 8	100 µl	IHC concentrated
APS-098-0.2	Anti-Cytokeratin 8	200 µl	IHC concentrated
APS-098-0.5	Anti-Cytokeratin 8	500 µl	IHC concentrated
APS-098-1	Anti-Cytokeratin 8	1 ml	IHC concentrated
APS-099 RTU-15	Anti-Cytokeratin 14	15 ml	IHC Prediluted
APS-099 RTU-7	Anti-Cytokeratin 14	7 ml	IHC Prediluted
APS-099-0.1	Anti-Cytokeratin 14	100 µl	IHC concentrated
APS-099-0.2	Anti-Cytokeratin 14	200 µl	IHC concentrated
APS-099-0.5	Anti-Cytokeratin 14	500 µl	IHC concentrated
APS-099-1	Anti-Cytokeratin 14	1 ml	IHC concentrated
APS-100 RTU-15	Anti-Cytokeratin 16	15 ml	IHC Prediluted
APS-100 RTU-7	Anti-Cytokeratin 16	7 ml	IHC Prediluted
APS-1000	FITC Rabbit IgG - Isotype control	100 tests	Flow Cytometry
APS-100-0.1	Anti-Cytokeratin 16	100 µl	IHC concentrated
APS-100-0.2	Anti-Cytokeratin 16	200 µl	IHC concentrated
APS-100-0.5	Anti-Cytokeratin 16	500 µl	IHC concentrated
APS-1001	Anti-PKC alpha	100 tests	Flow Cytometry
APS-100-1	Anti-Cytokeratin 16	1 ml	IHC concentrated
APS-1002	Anti-PKC beta I	100 tests	Flow Cytometry
APS-1003	Anti-PKC beta II	100 tests	Flow Cytometry
APS-1004	Anti-PKC gamma	100 tests	Flow Cytometry
APS-1005	Anti-PKC delta	100 tests	Flow Cytometry
APS-1006	Anti-PKC epsilon	100 tests	Flow Cytometry
APS-1007	Anti-PKC zeta	100 tests	Flow Cytometry
APS-1008	Anti-Erk 1,2	100 tests	Flow Cytometry
APS-101 RTU-15	Anti-Cytokeratin 17	15 ml	IHC Prediluted
APS-101 RTU-7	Anti-Cytokeratin 17	7 ml	IHC Prediluted
APS-1010	Anti-Bax	100 tests	Flow Cytometry
APS-101-0.1	Anti-Cytokeratin 17	100 µl	IHC concentrated
APS-101-0.2	Anti-Cytokeratin 17	200 µl	IHC concentrated
APS-101-0.5	Anti-Cytokeratin 17	500 µl	IHC concentrated
APS-1011	Anti-Bcl-2	100 tests	Flow Cytometry
APS-101-1	Anti-Cytokeratin 17	1 ml	IHC concentrated
APS-1012	Anti-p53	100 tests	Flow Cytometry
APS-1013	Anti-actin	100 tests	Flow Cytometry
APS-1014	Anti-cyclin-D1	100 tests	Flow Cytometry
APS-1015	Anti-ER (Estrogen Receptor)	100 tests	Flow Cytometry
APS-1016	Anti-CD23	100 tests	Flow Cytometry
APS-1017	Anti-CD5	100 tests	Flow Cytometry
APS-1018	Anti-CD10	100 tests	Flow Cytometry

APS-102 RTU-15	Anti-Cytokeratin 18	15 ml	IHC Prediluted
APS-102 RTU-7	Anti-Cytokeratin 18	7 ml	IHC Prediluted
APS-102-0.1	Anti-Cytokeratin 18	100 µl	IHC concentrated
APS-102-0.2	Anti-Cytokeratin 18	200 µl	IHC concentrated
APS-102-0.5	Anti-Cytokeratin 18	500 µl	IHC concentrated
APS-1021	Anti-CD8	100 tests	Flow Cytometry
APS-102-1	Anti-Cytokeratin 18	1 ml	IHC concentrated
APS-103 RTU-15	Anti-Cytokeratin 19	15 ml	IHC Prediluted
APS-103 RTU-7	Anti-Cytokeratin 19	7 ml	IHC Prediluted
APS-103-0.1	Anti-Cytokeratin 19	100 µl	IHC concentrated
APS-103-0.2	Anti-Cytokeratin 19	200 µl	IHC concentrated
APS-103-0.5	Anti-Cytokeratin 19	500 µl	IHC concentrated
APS-103-1	Anti-Cytokeratin 19	1 ml	IHC concentrated
APS-1034	Anti-Akt2	100 tests	Flow Cytometry
APS-1035	Anti-Akt2 (pSer-478)	100 tests	Flow Cytometry
APS-1036	Anti-CREB	100 tests	Flow Cytometry
APS-1039	Anti-p38 alpha	100 tests	Flow Cytometry
APS-1040	Anti-p38 beta	100 tests	Flow Cytometry
APS-1041	Anti-p38 gamma	100 tests	Flow Cytometry
APS-1042	Anti-p38 delta	100 tests	Flow Cytometry
APS-1043	Anti-Akt3	100 tests	Flow Cytometry
APS-1045	Anti-c-FOS	100 tests	Flow Cytometry
APS-1046	Anti-B-raf, V600-E	100 tests	Flow Cytometry
APS-1059	Anti-p40	100 tests	Flow Cytometry
APS-106 RTU-15	Anti-C3d complement	15 ml	IHC Prediluted
APS-106 RTU-7	Anti-C3d complement	7 ml	IHC Prediluted
APS-106-0.1	Anti-C3d complement	100 µl	IHC concentrated
APS-106-0.2	Anti-C3d complement	200 µl	IHC concentrated
APS-106-0.5	Anti-C3d complement	500 µl	IHC concentrated
APS-1061	Anti-p60	100 tests	Flow Cytometry
APS-106-1	Anti-C3d complement	1 ml	IHC concentrated
APS-107 RTU-15	Anti-C4d complement	15 ml	IHC Prediluted
APS-107 RTU-7	Anti-C4d complement	7 ml	IHC Prediluted
APS-107-0.1	Anti-C4d complement	100 µl	IHC concentrated
APS-107-0.2	Anti-C4d complement	200 µl	IHC concentrated
APS-107-0.5	Anti-C4d complement	500 µl	IHC concentrated
APS-107-1	Anti-C4d complement	1 ml	IHC concentrated
APS-108 RTU-15	Anti-PR (Progesterone Receptor)	15 ml	IHC Prediluted
APS-108 RTU-7	Anti-PR (Progesterone Receptor)	7 ml	IHC Prediluted
APS-108-0.1	Anti-PR (Progesterone Receptor)	100 µl	IHC concentrated
APS-108-0.2	Anti-PR (Progesterone Receptor)	200 µl	IHC concentrated
APS-108-0.5	Anti-PR (Progesterone Receptor)	500 µl	IHC concentrated

APS-108-1	Anti-PR (Progesterone Receptor)	1 ml	IHC concentrated
APS-109 RTU-15	Anti-PR (Progesterone Receptor)	15 ml	IHC Prediluted
APS-109 RTU-7	Anti-PR (Progesterone Receptor)	7 ml	IHC Prediluted
APS-109-0.1	Anti-PR (Progesterone Receptor)	100 µl	IHC concentrated
APS-109-0.2	Anti-PR (Progesterone Receptor)	200 µl	IHC concentrated
APS-109-0.5	Anti-PR (Progesterone Receptor)	500 µl	IHC concentrated
APS-109-1	Anti-PR (Progesterone Receptor)	1 ml	IHC concentrated
APS-1092	Anti-Akt1	100 tests	Flow Cytometry
APS-1093	Anti-Akt1 (pSer-473)	100 tests	Flow Cytometry
APS-1094	Anti-nephrin	100 tests	Flow Cytometry
APS-111 RTU-15	Anti-Ki-67	15 ml	IHC Prediluted
APS-111 RTU-7	Anti-Ki-67	7 ml	IHC Prediluted
APS-111-0.1	Anti-Ki-67	100 µl	IHC concentrated
APS-111-0.2	Anti-Ki-67	200 µl	IHC concentrated
APS-111-0.5	Anti-Ki-67	500 µl	IHC concentrated
APS-111-1	Anti-Ki-67	1 ml	IHC concentrated
APS-114 RTU-15	Anti-CD7	15 ml	IHC Prediluted
APS-114 RTU-7	Anti-CD7	7 ml	IHC Prediluted
APS-114-0.1	Anti-CD7	100 µl	IHC concentrated
APS-114-0.2	Anti-CD7	200 µl	IHC concentrated
APS-114-0.5	Anti-CD7	500 µl	IHC concentrated
APS-114-1	Anti-CD7	1 ml	IHC concentrated
APS-115 RTU-15	Anti-MSH2	15 ml	IHC Prediluted
APS-115 RTU-7	Anti-MSH2	7 ml	IHC Prediluted
APS-115-0.1	Anti-MSH2	100 µl	IHC concentrated
APS-115-0.2	Anti-MSH2	200 µl	IHC concentrated
APS-115-0.5	Anti-MSH2	500 µl	IHC concentrated
APS-115-1	Anti-MSH2	1 ml	IHC concentrated
APS-119 RTU-15	Anti-Cytokeratin 20	15 ml	IHC Prediluted
APS-119 RTU-7	Anti-Cytokeratin 20	7 ml	IHC Prediluted
APS-119-0.1	Anti-Cytokeratin 20	100 µl	IHC concentrated
APS-119-0.2	Anti-Cytokeratin 20	200 µl	IHC concentrated
APS-119-0.5	Anti-Cytokeratin 20	500 µl	IHC concentrated
APS-119-1	Anti-Cytokeratin 20	1 ml	IHC concentrated
APS-123-0.05	Anti-BAX	50 µl	Western Blot
APS-123-0.1	Anti-BAX	100 µl	Western Blot
APS-126-0.05	Anti-Akt1	50 µl	Western Blot
APS-126-0.1	Anti-Akt1	100 µl	Western Blot
APS-127-0.05	Anti-Akt1 (pSer-473)	50 µl	Western Blot
APS-127-0.1	Anti-Akt1 (pSer-473)	100 µl	Western Blot
APS-132-0.05	Anti-Bcl-2	50 µl	Western Blot
APS-132-0.1	Anti-Bcl-2	100 µl	Western Blot

APS-133-0.05	Anti-p63/TP63	50 µl	Western Blot
APS-133-0.1	Anti-p63/TP63	100 µl	Western Blot
APS-134 RTU-15	Anti-p63	15 ml	IHC Prediluted
APS-134 RTU-7	Anti-p63	7 ml	IHC Prediluted
APS-134-0.1	Anti-p63	100 µl	IHC concentrated
APS-134-0.2	Anti-p63	200 µl	IHC concentrated
APS-134-0.5	Anti-p63	500 µl	IHC concentrated
APS-134-1	Anti-p63	1 ml	IHC concentrated
APS-135 RTU-15	Anti-CD23	15 ml	IHC Prediluted
APS-135 RTU-7	Anti-CD23	7 ml	IHC Prediluted
APS-135-0.1	Anti-CD23	100 µl	IHC concentrated
APS-135-0.2	Anti-CD23	200 µl	IHC concentrated
APS-135-0.5	Anti-CD23	500 µl	IHC concentrated
APS-135-1	Anti-CD23	1 ml	IHC concentrated
APS-147 RTU-15	Anti-Alpha Smooth Muscle Actin	15 ml	IHC Prediluted
APS-147 RTU-7	Anti-Alpha Smooth Muscle Actin	7 ml	IHC Prediluted
APS-147-0.1	Anti-Alpha Smooth Muscle Actin	100 µl	IHC concentrated
APS-147-0.2	Anti-Alpha Smooth Muscle Actin	200 µl	IHC concentrated
APS-147-0.5	Anti-Alpha Smooth Muscle Actin	500 µl	IHC concentrated
APS-147-1	Anti-Alpha Smooth Muscle Actin	1 ml	IHC concentrated
APS-148 RTU-15	Anti-Desmin	15 ml	IHC Prediluted
APS-148 RTU-7	Anti-Desmin	7 ml	IHC Prediluted
APS-148-0.1	Anti-Desmin	100 µl	IHC concentrated
APS-148-0.2	Anti-Desmin	200 µl	IHC concentrated
APS-148-0.5	Anti-Desmin	500 µl	IHC concentrated
APS-148-1	Anti-Desmin	1 ml	IHC concentrated
APS-151 RTU-15	Anti-CD34	15 ml	IHC Prediluted
APS-151 RTU-7	Anti-CD34	7 ml	IHC Prediluted
APS-151-0.1	Anti-CD34	100 µl	IHC concentrated
APS-151-0.2	Anti-CD34	200 µl	IHC concentrated
APS-151-0.5	Anti-CD34	500 µl	IHC concentrated
APS-151-1	Anti-CD34	1 ml	IHC concentrated
APS-152 RTU-15	Anti-p16	15 ml	IHC Prediluted
APS-152 RTU-7	Anti-p16	7 ml	IHC Prediluted
APS-152-0.1	Anti-p16	100 µl	IHC concentrated
APS-152-0.2	Anti-p16	200 µl	IHC concentrated
APS-152-0.5	Anti-p16	500 µl	IHC concentrated
APS-152-1	Anti-p16	1 ml	IHC concentrated
APS-156 RTU-15	Anti-Synaptophysin	15 ml	IHC Prediluted
APS-156 RTU-7	Anti-Synaptophysin	7 ml	IHC Prediluted
APS-156-0.1	Anti-Synaptophysin	100 µl	IHC concentrated
APS-156-0.2	Anti-Synaptophysin	200 µl	IHC concentrated

APS-156-0.5	Anti-Synaptophysin	500 µl	IHC concentrated
APS-156-1	Anti-Synaptophysin	1 ml	IHC concentrated
APS-157 RTU-15	Anti-Chromogranin A	15 ml	IHC Prediluted
APS-157 RTU-7	Anti-Chromogranin A	7 ml	IHC Prediluted
APS-157-0.1	Anti-Chromogranin A	100 µl	IHC concentrated
APS-157-0.2	Anti-Chromogranin A	200 µl	IHC concentrated
APS-157-0.5	Anti-Chromogranin A	500 µl	IHC concentrated
APS-157-1	Anti-Chromogranin A	1 ml	IHC concentrated
APS-158 RTU-15	Anti-Chromogranin A	15 ml	IHC Prediluted
APS-158 RTU-7	Anti-Chromogranin A	7 ml	IHC Prediluted
APS-158-0.1	Anti-Chromogranin A	100 µl	IHC concentrated
APS-158-0.2	Anti-Chromogranin A	200 µl	IHC concentrated
APS-158-0.5	Anti-Chromogranin A	500 µl	IHC concentrated
APS-158-1	Anti-Chromogranin A	1 ml	IHC concentrated
APS-159 RTU-15	Anti-Braf	15 ml	IHC Prediluted
APS-159 RTU-7	Anti-Braf	7 ml	IHC Prediluted
APS-159-0.1	Anti-Braf	100 µl	IHC concentrated
APS-159-0.2	Anti-Braf	200 µl	IHC concentrated
APS-159-0.5	Anti-Braf	500 µl	IHC concentrated
APS-159-1	Anti-Braf	1 ml	IHC concentrated
APS-161-0.05	Anti-p38-α	50 µl	Western Blot
APS-161-0.1	Anti-p38-α	100 µl	Western Blot
APS-162-0.05	Anti-p38-β	50 µl	Western Blot
APS-162-0.1	Anti-p38-β	100 µl	Western Blot
APS-163-0.05	Anti-p38-γ	50 µl	Western Blot
APS-163-0.1	Anti-p38-γ	100 µl	Western Blot
APS-164-0.05	Anti-p38-δ	50 µl	Western Blot
APS-164-0.1	Anti-p38-δ	100 µl	Western Blot
APS-168-0.05	Anti-CREB	50 µl	Western Blot
APS-168-0.1	Anti-CREB	100 µl	Western Blot
APS-173 RTU-15	Anti-Human IgG	15 ml	IHC Prediluted
APS-173 RTU-7	Anti-Human IgG	7 ml	IHC Prediluted
APS-173-0.1	Anti-Human IgG	100 µl	IHC concentrated
APS-173-0.2	Anti-Human IgG	200 µl	IHC concentrated
APS-173-0.5	Anti-Human IgG	500 µl	IHC concentrated
APS-173-1	Anti-Human IgG	1 ml	IHC concentrated
APS-174 RTU-15	Anti-Human IgG	15 ml	IHC Prediluted
APS-174 RTU-7	Anti-Human IgG	7 ml	IHC Prediluted
APS-174-0.1	Anti-Human IgG	100 µl	IHC concentrated
APS-174-0.2	Anti-Human IgG	200 µl	IHC concentrated
APS-174-0.5	Anti-Human IgG	500 µl	IHC concentrated
APS-174-1	Anti-Human IgG	1 ml	IHC concentrated



APS-182-0.05	Anti-Akt2	50 µl	Western Blot
APS-182-0.1	Anti-Akt2	100 µl	Western Blot
APS-183-0.05	Anti-Akt2 (pSer-478) (For ICC use only)	50 µl	Western Blot
APS-183-0.1	Anti-Akt2 (pSer-478) (For ICC use only)	100 µl	Western Blot
APS-184-0.05	Anti-Akt3	50 µl	Western Blot
APS-184-0.1	Anti-Akt3	100 µl	Western Blot
APS-185-0.05	Anti-c-FOS	50 µl	Western Blot
APS-185-0.1	Anti-c-FOS	100 µl	Western Blot
APS-186-0.05	Anti-c-FOS	50 µl	Western Blot
APS-186-0.1	Anti-c-FOS	100 µl	Western Blot
APS-203 RTU-15	Anti-p60	15 ml	IHC Prediluted
APS-203 RTU-7	Anti-p60	7 ml	IHC Prediluted
APS-203-0.1	Anti-p60	100 µl	IHC concentrated
APS-203-0.2	Anti-p60	200 µl	IHC concentrated
APS-203-0.5	Anti-p60	500 µl	IHC concentrated
APS-203-1	Anti-p60	1 ml	IHC concentrated
APS-208 RTU-15	Anti-P504S (AMACR)	15 ml	IHC Prediluted
APS-208 RTU-7	Anti-P504S (AMACR)	7 ml	IHC Prediluted
APS-208-0.1	Anti-P504S (AMACR)	100 µl	IHC concentrated
APS-208-0.2	Anti-P504S (AMACR)	200 µl	IHC concentrated
APS-208-0.5	Anti-P504S (AMACR)	500 µl	IHC concentrated
APS-208-1	Anti-P504S (AMACR)	1 ml	IHC concentrated
APS-211-0.1	Anti-CD15	100 µl	IHC concentrated
APS-211-0.2	Anti-CD15	200 µl	IHC concentrated
APS-211-0.5	Anti-CD15	500 µl	IHC concentrated
APS-211-1	Anti-CD15	1 ml	IHC concentrated
APS-211-RTU-15	Anti-CD15	15 ml	IHC Prediluted
APS-211-RTU-7	Anti-CD15	7 ml	IHC Prediluted
APS-213-0.1	Anti-CD21	100 µl	IHC concentrated
APS-213-0.2	Anti-CD21	200 µl	IHC concentrated
APS-213-0.5	Anti-CD21	500 µl	IHC concentrated
APS-213-1	Anti-CD21	1 ml	IHC concentrated
APS-213-RTU-15	Anti-CD21	15 ml	IHC Prediluted
APS-213-RTU-7	Anti-CD21	7 ml	IHC Prediluted
APS-216-0.1	Anti-CD57	100 µl	IHC concentrated
APS-216-0.2	Anti-CD57	200 µl	IHC concentrated
APS-216-0.5	Anti-CD57	500 µl	IHC concentrated
APS-216-1	Anti-CD57	1 ml	IHC concentrated
APS-216-RTU-15	Anti-CD57	15 ml	IHC Prediluted
APS-216-RTU-7	Anti-CD57	7 ml	IHC Prediluted
APS-229-0.1	Anti-p63	100 µl	IHC concentrated
APS-229-0.2	Anti-p63	200 µl	IHC concentrated



APS-229-0.5	Anti-p63	500 µl	IHC concentrated
APS-229-1	Anti-p63	1 ml	IHC concentrated
APS-229-RTU-15	Anti-p63	15 ml	IHC Prediluted
APS-229-RTU-7	Anti-p63	7 ml	IHC Prediluted
APS-232-0.05	Anti-S-100 (For ICC use only)	50 µl	Western Blot
APS-232-0.1	Anti-S-100 (For ICC use only)	100 µl	Western Blot
APS-233-0.05	Anti-Cytokeratin 18 (For ICC use only)	50 µl	Western Blot
APS-233-0.1	Anti-Cytokeratin 18 (For ICC use only)	100 µl	Western Blot
APS-234-0.05	Anti-Cytokeratin 19 (For ICC use only)	50 µl	Western Blot
APS-234-0.1	Anti-Cytokeratin 19 (For ICC use only)	100 µl	Western Blot
APS-D - 125	DB Primary Antibody diluent	125 ml	Detection System
APS-D - 250	DB Primary Antibody diluent	250 ml	Detection System
APS-DET KIT-100	DB Detection KIT - rabbit/mouse dual, HRP/DAB	100 ml	Detection System
APS-DET KIT- 50	DB Detection KIT - rabbit/mouse dual, HRP/DAB	50 ml	Detection System
APS-DET SYS	DB Detection system rabbit/mouse dual - HRP	100 ml	Detection System
APS-Retcit - 250	DB Antigen retrieval solution, pH6, 10x concentrated	250 ml	Detection System
APS-Retcit - 500	DB Antigen retrieval solution, pH6, 10xconcentrated	500 ml	Detection System
APS-Retris - 250	DB Antigen retrieval solution, pH9, 10x concentrated	250 ml	Detection System
APS-TMA 12-3	TMA Building Kit - 12 x 3 mm <sup>2</sup>	Kit	TMA Building Kit
APS-TMA 24-2	TMA Building Kit - 24 x 2 mm <sup>2</sup>	Kit	TMA Building Kit
APS-TMA 70-1	TMA Building Kit - 70 x 1 mm <sup>2</sup>	Kit	TMA Building Kit
APS-TMA 8-4	TMA Building Kit - 8 x 4 mm <sup>2</sup>	Kit	TMA Building Kit
APS-TMA Set	TMA Set - 1 pc of DB TMA 70-1 + one pc of DB TMA 24-2 + one pc of DB TMA 12-3	Kit	TMA Building Kit

## Disclaimer

This product is for *in vitro* use only, research or diagnostic applications.

## Support

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