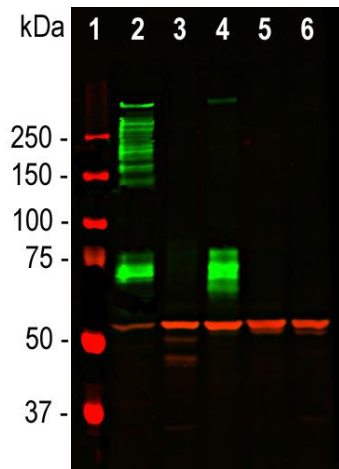
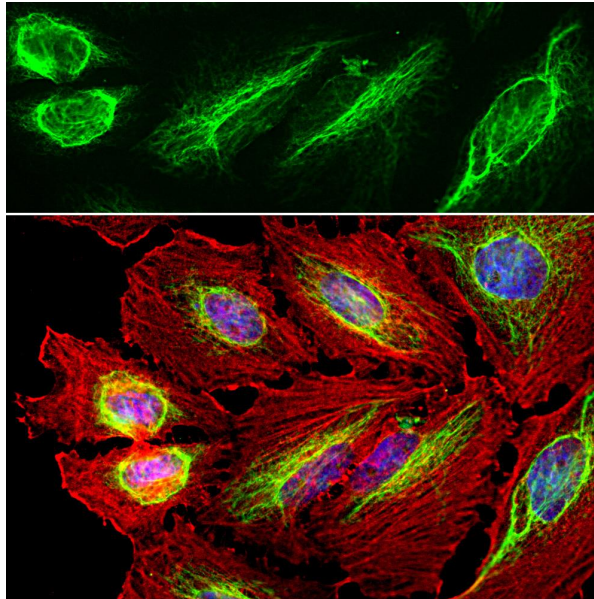

Product name:	Vimentin
Cat number:	AB-83918
Conjugate:	Unconjugated
Size:	100 ug
Clone:	POLY
Concentration:	1mg/ml
Host:	Ch
Isotype:	IgY
Immunogen:	Full length recombinant human vimentin protein , PROT-r-Vim, expressed in and purified from E. coli. expressed in and purified from E. coli.
Reactivity:	Hu Rt Ms,Cw, Pg, Ho, Dg, Ch, Mk
Applications:	Western Blot: 1:5,000. Immunofluorescence: 1:2,500. Immunocytochemistry: 1:2,500 Immunohistochemistry (Frozen): 1:2,500
Molecular Weight:	50 kDa
Purification:	Purified
Form:	Liquid
Buffer:	Supplied as an aliquot of IgY preparation plus 5mM NaN ₃
Storage:	Stable at 4°C for at least one year

Background:

Vimentin is a protein subunit of the intermediate or 10nm filaments found in the cytoplasm of many cell types (1). Intermediate filaments are relatively stable fibrous components of cells which appear to have primarily a mechanical function. Many cell lines such as HEK293, HeLa, 3T3 and Cos cells contain prominent vimentin networks (1). Vimentin is a major protein of eye lens and cornea, and found generally in mesenchymal tissues in adult mammals. In the CNS it is found in endothelia and developing neurons, developing and some mature astrocytes, microglia, mature Bergmann glia and ependyma (2,3). Mutations in the vimentin gene may cause cataracts (4,5), and elevated levels of vimentin in blood samples are associated with onset of cancer (6,7). Vimentin levels increase in a variety of cell types as they become cancerous, suggesting that increase in expression of this protein is a useful diagnostic marker of the epithelial-mesenchymal transition, an important step in the metastasis of carcinoma cells (8). The Vim antibody can be used to study stem cells and generally to reveal the intermediate filament cytoskeleton. The immunogen used to generate this antibody was full length recombinant human vimentin, PROT-r-Vim, expressed in and purified from *E. coli*. The antibody works well on all mammals tested to date, and it was generated in chicken by standard procedures and immunoglobulin was extracted from egg yolk. The resulting polyclonal antibody belongs to the IgY subclass, the chicken homolog of mammalian IgG and can be used in the same way, with the caveat that this type of antibody does not bind either Protein A or Protein G. Suitable second antibody reagents can be obtained from many vendors. The same vimentin immunogen was used to produce two high quality epitope mapped monoclonal antibodies to vimentin 2A52 and 2D1, and also a rabbit polyclonal antibody Vimentin.



Western blot analysis of tissue and cell lysates using chicken pAb to Vimentin, Vim, dilution 1:5,000 in red. [1] protein standard (red), [2] rat whole brain lysate, [3] HeLa, [4] SH-SY5Y, [5] HEK293, and [6] NIH-3T3 cell lysates. Vim binds to the vimentin protein showing a single band at ~50 kDa. The blot was simultaneously probed with mouse mAb to MAP2C/D, 2C4, dilution 1:5,000 in green, revealing multiple bands around 280kDa that correspond to full length MAP2A/2B isotypes, and ~70kDa bands which are MAP2C/D isotypes. MAP2 isotypes are seen only in extracts containing neuronal lineage cells.



Immunofluorescent analysis of HeLa cell culture stained with chicken pAb to vimentin, Vim, dilution 1:5,000 in green, and costained with mouse mAb to actin, dilution 1:500 in red. The blue is DAPI staining of nuclear DNA. The vimentin antibody stains the intermediate filament network while the actin antibody labels the submembranous cytoskeleton, stress fibers, and bundles of actin associated with cell adhesion sites.