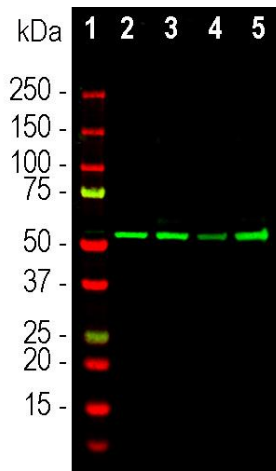
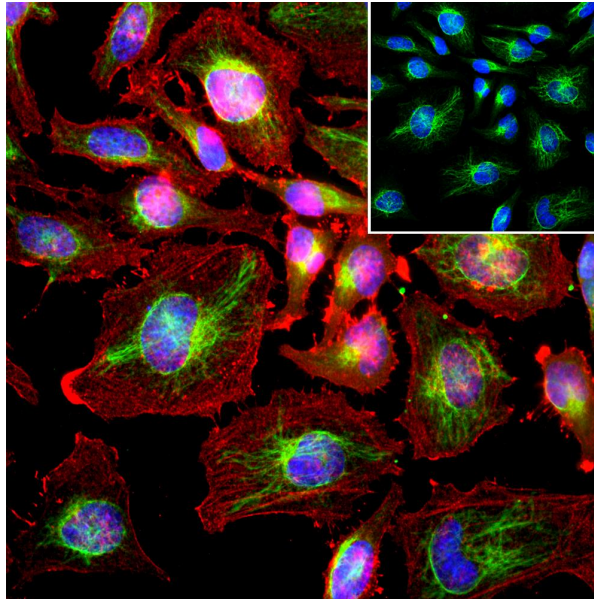

Product name:	Vimentin
Cat number:	AB-83919
Conjugate:	Unconjugated
Size:	100 ug
Clone:	POLY
Concentration:	1mg/ml
Host:	Gt
Isotype:	IgG
Immunogen:	Recombinant human vimentin expressed in and purified from E. coli Format: Supplied as an aliquot of serum plus 5mM sodium azide
Reactivity:	Hu Rt Ms, Ho, Dg
Applications:	Western Blot: 1:2,500 Immunofluorescence: 1:1000 Immunocytochemistry: 1:1000 Immunohistochemistry: 1:1000
Molecular Weight:	50 kDa
Purification:	Purified
Form:	Liquid
Storage:	Store at 4°C for short term, for longer term at -20°C. Avoid freeze / thaw cycles

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 containing filaments accumulate around aggresomes, cytoplasmic clumps of misfolded and often ubiquitinated proteins, and so vimentin antibodies provide one means to identify these structures (2). Vimentin is a major protein of eye lens and cornea, and found 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 in the cerebellum, Müller glia in the retina and ependymal cells (e.g. 3,4). Mutations in the vimentin gene may cause cataracts (5,6), and elevated levels of vimentin in blood samples are associated with onset of cancer (7,8). 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 (9). The GPCA-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. Vimentin is a major protein of eye lens and cornea, and this mutation renders the molecule unable assemble into normal 10nm filaments. Antibodies to vimentin are useful in studies of stem cells and generally to reveal the filamentous cytoskeleton. The antibody works well on all mammals tested to date, and it was generated in goat by standard procedures. The same vimentin immunogen was used to produce two high quality epitope mapped monoclonal antibodies to vimentin, and also widely used rabbit and chicken polyclonal antibodies VIM and VIM.



Western blot analysis of different cell lysates using goat pAb to vimentin, Vim, dilution 1:5,000 in green. [1] protein standard, [2] HeLa, [3] HEK293, [4] NIH-3T3 and [5] C6 cell lysates. The Vim antibody binds to the vimentin protein showing a single band at ~50kDa.



Immunofluorescent analysis of HeLa cell culture stained with goat pAb to vimentin Vim, dilution 1:500 in green, and costained with mouse mAb to actin, dilution 1:500 in red. Blue is Hoechst staining of nuclear DNA. Vim antibody produces strong staining of intermediate filament network of the cytoskeleton, while actin antibody stains the submembranous actin-rich cytoskeleton, stress fibers and bundles of actin associated with cell adhesion sites.