Vimentin Full Length Recombinant Protein

PROT-r-Vim

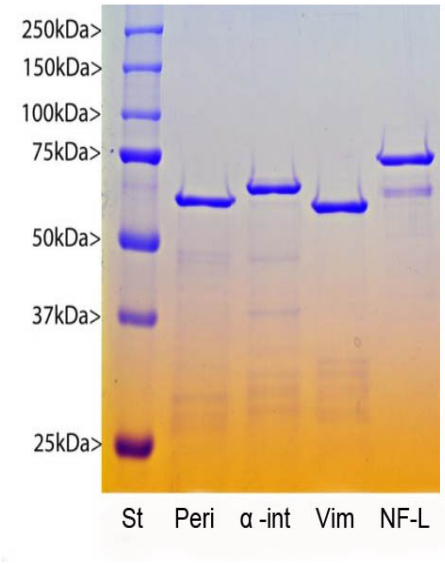
Ordering Information
Web ***www.encorbio.com***
Email ***admin@encorbio.com***
Phone ***352-372-7022***
Fax ***352-372-7066***

HGNC Name: *VIM*
RRID: *NA*
Format: *1mg/mL in 6M Urea, 10mM phosphate pH=7.5*
Storage: *Stable at 4°C for several months. For longer term store at -20°C or lower*
UniProt: *P08670*

References:

1. Franke WW, et al. Different intermediate-sized filaments distinguished by immunofluorescence microscopy. PNAS 75:5034–8 (1978).
2. Muller M, et al. Dominant cataract formation in association with a vimentin assembly disrupting mutation. Hum. Molec. Genet. 18:1052-7 (2009).
3. Chaw SY, et al. Epithelial to mesenchymal transition (EMT) biomarkers – E-cadherin, beta-catenin, APC and Vimentin – in oral squamous cell carcinogenesis and transformation Oral Oncol. 48:997-1006 (2012).
4. Toiyama Y, et al. Increased expression of Slug and Vimentin as novel predictive biomarkers for lymph node metastasis and poor prognosis in colorectal cancer. Carcinogenesis 34:2548-57 (2013).

Applications	Host	Molecular Wt.	HGNC	UniPort
Protein standard for ELISA, MSD, Luminex and Simoa assays, also immunogen for antibody production	E. coli	54kDa by SDS-PAGE plus about 5kDa tag sequence	VIM	P08670



Coomassie Brilliant Blue stained SDS-PAGE gel of various recombinant proteins expressed in and purified from *E. coli*. 1µg of protein was run on each lane, and the lane indicated with "NF-L" contains the human neurofilament NF-L protein. The other lanes show recombinant human peripherin (Peri), human α-internexin (α-int) and human vimentin (Vim) as indicated. Protein molecular weight standards are in the first lane and apparent molecular weights of the recombinant proteins are as indicated. In each case the proteins run at about 5kDa higher than the native protein due to the presence of the His-tag and other vector derived sequence. The band below the major NF-L band represents a proteolytic fragment seen in bacterial preparations and also in vivo. The lower band stains with most NF-L antibodies but not with those directed against the extreme C-terminus (see for example MCA-6H112).

Background:

Vimentin is a member of the intermediate or 10nm family of proteins, which are abundant structural components of most eukaryotic cells. Vimentin is found in most cell lines grown in tissue culture (1). In adult animals vimentin is expressed in mesenchymal cells, lymphocytes, some types of glia, endothelial cells and many other cell types particularly early in development (2). Several recent studies suggest that vimentin may be detected in blood in increased levels in association with various disease processes, so that detection of serum or plasma vimentin might be useful as a diagnostic or prognostic biomarker of damage or disease (e.g. 3,4).

We designed a cDNA to encode human vimentin optimized or expression in E. coli which was inserted into the pET30a(+) vector. This vector adds an N-terminal His-tag and some other vector sequence which can be removed with thrombin or enterokinase proteases. The His-tag allows convenient purification using Nickel affinity chromatography. Sensitive ELISA, MSD, Luminex and Simoa assays for vimentin have been developed and are widely used in research and clinical contexts. This recombinant protein can be used as a convenient protein standard for such assays.

Abbreviation Key:

mAb—Monoclonal Antibody pAb—Polyclonal Antibody WB—Western Blot IF—Immunofluorescence ICC—Immunocytochemistry IHC—Immunohistochemistry E—ELISA Hu—Human Mo—Monkey Do—Dog Rt—Rat Ms—Mouse Co—Cow Pi—Pig Ho—Horse Ch—Chicken Dr—D. rerio Dm—D. melanogaster Sm—S. mutans Ce—C. elegans Sc—S. cerevisiae Sa—S. aureus Ec—E. coli.