Background: TIMPs are members of the family of tissue inhibitor of matrix metalloproteinases (MMPs) that includes TIMP1, TIMP2, TIMP3, and TIMP4. The main function of TIMPs is their inhibitory effect on MMPs. TIMPs irreversibly inactivate MMPs by direct binding to their catalytic zinc cofactor and resultant inhibition of proteinase function (1,2). In addition to MMP inhibition, TIMPs have also been shown to interact with various membrane receptors on the cell surface. Some of these interactions include: TIMP1 with CD63, TIMP2 with α3β1 integrin, and TIMP3 with VEGFR2, all of which result in distinct cellular effects (3). TIMPs are involved in a wide variety of biological functions, such as tumor angiogenesis and progression (4,5), wound healing, and vascular remodeling (6,7). Mutations in TIMP3 are associated with Sorsby's fundus dystrophy (8,9).

Specificity/Sensitivity: TIMP1 (D10E6) Rabbit mAb recognizes endogenous levels of total TIMP1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala134 of human TIMP1 protein.

Background References:

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.