**Human Tissue Inhibitor of Matrix Metalloproteinase 2**  
**Clone 46E5**  
**Cat. no. MONX10588**

### Specificity
Tissue inhibitors of matrix metalloproteinases (TIMPs) play an important role in regulating the activity of matrix metalloproteinases (MMPs). Tumour cell invasion and metastasis closely correlate with the activities of two MMPs, MMP2 and MMP9, both of which degrade type IV collagen in basement membranes. TIMPs constitute a family of at least three types of protein of which TIMP1 and TIMP2 are expressed in a wide variety of cell types. Although TIMP1 and TIMP2 inhibit all types of activated MMPs to varying degrees, TIMP2 is known to preferentially inhibit MMP2. TIMP1 and TIMP2 also bind to proMMP9 and proMMP2, respectively, to form stable complexes in which activation of the proenzymes is expressed. Studies have revealed that both TIMP1 and TIMP2 can inhibit the invasive potential of tumour cells in vitro and their metastatic phenotype in vivo. In gastric cancers, approximately 57 per cent are known to express TIMP2 but of these only 16 per cent stained strongly with fibroblasts also noted to stain immunohistochemically for TIMP2. MONX10588 may be used to evaluate the invasive nature of some tumour types, eg colorectal carcinomas, and determine the tissue distribution of TIMPs in other tumours such as adenomas and also in normal tissue.

### Immunoglobulin type
Murine IgG1, kappa

### Use
The antibody can be used for immunohistochemistry on paraffin sections and Western blotting.

### Instructions for use

- **Immunohistochemistry:**
  - Typical working dilution 1:20.
  - High temperature antigen unmasking technique using 1mM EDTA (pH8.0).
  - 60 minutes primary antibody incubation at 25°C.
  - Standard ABC technique.

- **Western blotting:**
  - Typical working dilution 1:250 - 1:500 (ECL™, Amersham Pharmacia Biotech).

  - **Staining pattern:** cytoplasmic

  - **Antigen used for immunizations:** Prokaryotic recombinant protein corresponding to a 158 amino acid region of the human tissue inhibitor of matrix metalloproteinase 2 molecule (TIMP2).

### Positive control
Placenta

### Presentation
Lyophilised tissue culture supernatant containing 15mM sodium azide.
Reconstitute with 1 ml or 0.1 ml of sterile distilled water as indicated on vial label.
Literature

Storage and Handling
Store unopened lyophilised antibody at 4°C. Under these conditions, there is no significant loss in product performance up to the expiry date indicated on the vial label. The reconstituted antibody is stable for at least two months when stored at 4°C. For long term storage, it is recommended that aliquots of the antibody are frozen at -20°C (frost-free freezers are not recommended). Repeated freezing and thawing must be avoided. Prepare working dilutions on the day of use.

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