

### 30-1323: Anti-gamma-tubulin 1 Monoclonal Antibody (Clone:TU-30)

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|--------------------------------|--|
| <b>Clonality :</b>             | Monoclonal   |
| <b>Clone Name :</b>            | TU-30  |
| <b>Application :</b>           | ICC  |
| <b>Reactivity :</b>            | Human  |
| <b>Gene :</b>                  | TUBG1  |
| <b>Gene ID :</b>               | 7283   |
| <b>Uniprot ID :</b>            | P23258   |
| <b>Format :</b>                | Purified   |
| <b>Alternative Name :</b>      | TUBG1,TUBG   |
| <b>Isotype :</b>               | Mouse IgG1   |
| <b>Immunogen Information :</b> | C-terminal peptide of gamma-tubulin conjugated to KLH. |

#### Description

The gamma-tubulin (TUBG1; relative molecular weight about 48 kDa) is a minor member of tubulin family (less than 0.01% of tubulin dimer). The gamma-tubulin ring structures, however, serve to provide structural primer for initiation of microtubular nucleation and growth, thereby being crucial for microtubule-based cellular processes, above all for mitotic spindle formation. In animal cells, a center of microtubule organization is the centrosome composed of a pair of cylindrical centrioles surrounded by fibrous pericentriolar material containing gamma-tubulin. Formation of the mitotic spindle is preceded by duplication of centrosome during S phase. Before mitosis, both centrosomes increase their microtubule nucleation capacity and form two microtubule asters that are pushed apart from each other by the forces of motor proteins associated at the microtubule surface. Humans possess two gamma-tubulin genes. Gamma-tubulin 1 represents a ubiquitous isotype, whereas gamma-tubulin 2 is found predominantly in the brain, where it may be endowed with divergent functions beyond microtubule nucleation.

#### Product Info

|                            |   |
|----------------------------|---|
| <b>Amount :</b>            | 0.1 mg  |
| <b>Purification :</b>      | Purified by protein-A affinity chromatography |
| <b>Storage condition :</b> | Store at 2-8°C. Do not freeze.                |

#### Application Note

Immunocytochemistry: Recommended dilution: 1-2 µg/ml. Staining technique: (a) Fix cells for 10 min in methanol at -20°C and for 6 min in acetone at -20°C; (b) Fix cells directly in methanol for 10 min at -20°C or in acetone for 10 min at -20°C. Positive control: P-19 murine embryonal carcinoma cell line, 3T3 murine fibroblasts. The antibody TU-30 stains only fixed cells.

Western blotting: Recommended dilution 1-2 µg/ml, reducing conditions.

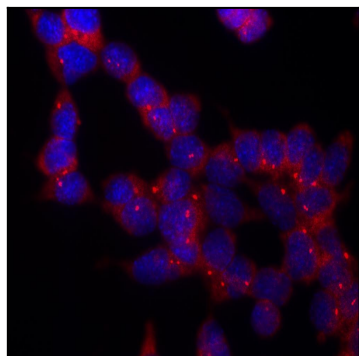


Figure 1: Immunofluorescence staining of P19X1 mouse embryonal carcinoma cell line using anti-gamma-tubulin (TU-30) (detection by secondary antibody Goat anti-mouse Cy3). Nuclei were stained with DAPI (blue).

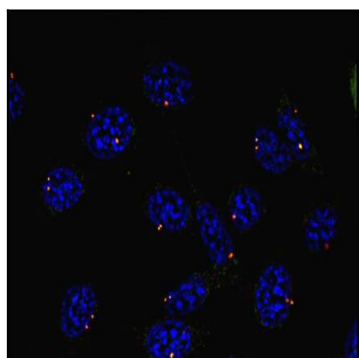


Figure 2: Immunofluorescence staining of mouse fibroblasts using anti-gamma-tubulin (TU-30; direct conjugate with Dyomics 547, red). Nuclei were stained with DAPI (blue). Fig. 3A, 3B, 3C Immunofluorescence staining (mouse fibroblasts) Fig. 3. Immunofluorescence staining of microtubular networks in 3T3 mouse fibroblasts. 3A - metaphase; 3B - anaphase; 3C - telophase Gamma-tubulin (red) stained with anti-gamma-tubulin (TU-30), alpha-tubulin (green) with polyclonal anti-alpha-tubulin antibody and nuclei with DAPI (blue).

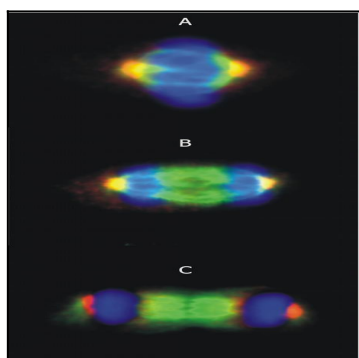


Figure 3: Immunofluorescence staining of microtubular networks in 3T3 mouse fibroblasts. 3A - metaphase; 3B - anaphase; 3C - telophase Gamma-tubulin (red) stained with anti-gamma-tubulin (TU-30), alpha-tubulin (green) with polyclonal anti-alpha-tubulin antibody and nuclei with DAPI (blue).

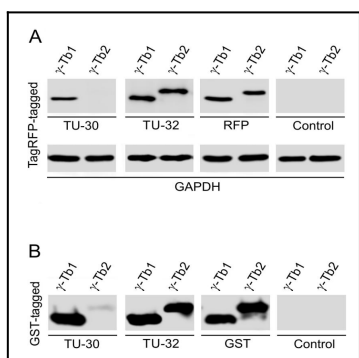


Figure 4: Differential reactivity of monoclonal antibodies to gamma-tubulin-tubulin with human gamma-tubulin-tubulin isotypes.