9853 Pacific Heights Blvd.
Suite D. San Diego,
CA 92121, USA
Tel: 858-263-4982
Email: info@abeomics.com

30-1153: Anti-beta-tubulin Monoclonal Antibody (Clone:TU-06)

Clonality :	Monoclonal
Clone Name :	TU-06
Application :	WB
Reactivity :	Broad species reactivity
Format :	Purified
Isotype :	Mouse IgM
Immunogen Information :	Beta-subunits of porcine brain tubulin.

Description

The microtubules are intracellular dynamic polymers made up of evolutionarily conserved polymorphic alpha/beta-tubulin heterodimers and a large number of microtubule-associated proteins (MAPs). The microtubules consist of 13 protofilaments and have an outer diameter 25 nm. Microtubules have their intrinsic polarity; highly dynamic plus ends and less dynamic minus ends. Microtubules are required for vital processes in eukaryotic cells including mitosis, meiosis, maintenance of cell shape and intracellular transport. Microtubules are also necessary for movement of cells by means of flagella and cilia. In mammalian tissue culture cells microtubules have their minus ends anchored in microtubule organizing centers (MTOCs).The GTP (guanosintriphosphate) molecule is an essential for tubulin heterodimer to associate with other heterodimers to form microtubule. In vivo, microtubule dynamics vary considerably. Microtubule polymerization is reversible and a populations of microtubules in cells are on their minus ends either growing or shortening - this phenomenon is called dynamic instability of microtubules. On a practical level, microtubules can easily be stabilized by the addition of non-hydrolysable analogues of GTP (eg. GMPPCP) or more commonly by anti-cancer drugs such as Taxol. Taxol stabilizes microtubules at room temperature for many hours. Using limited proteolysis by enzymes both tubulin subunits can be divided into N-terminal and C-terminal structural domains. The beta-tubulin (relative molecular weight around 50 kDa) is counterpart of alpha-tubulin in tubulin heterodimer, it is coded by multiple tubulin genes and it is also posttranslationally modified. Heterogeneity of subunit is concentrated in C-terminal structural domain.

Product Info

Amount :	0.1 mg
Purification :	Purified by precipitation and chromatography
Storage condition :	Store at 2-8°C. Do not freeze.

Application Note

Immunocytochemistry: Recommended dilution: 2 µg/ml, fixed and permeabilized cells; positive control: 3T3 mouse embryonal fibroblast cell line. Immunohistochemistry (paraffin sections): Recommended dilution: 5 µg/ml, positive tissue: heart. Western blotting: Recommended dilution: 1-2 µg/ml.

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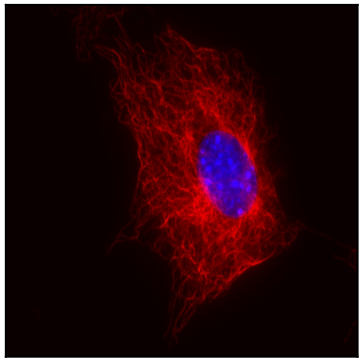

Figure 1: Immunofluorescence staining of 3T3 mouse embryonal fibroblast cell line using anti-beta-tubulin (TU-06) (detection by Goat anti-mouse IgM Cy®5). Nucleus is stained with DAPI (blue).

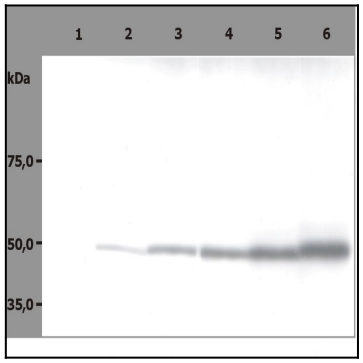

Figure 2: Western Blotting analysis (reducing conditions) of HPB-ALL human peripheral blood leukemia cell line.Lane 1: negative control.Lane 2,3,4,5,6: immunostaining with anti-beta-tubulin (TU-06; dilution 0,5 µg/ml, 1 µg/ml, 2 µg/ml, 4 µg/ml, 5 µg/ml)