

Product Specification Sheet

**Purified bovine brain Tubulin**

Cat. # TUBL16-N-100

Purified bovine brain Tubulin protein

**SIZE:** 100 ug

Microtubules are filamentous structures that serve in a variety of cellular functions including cell mobility, intracellular transport, and cell division. Microtubules are heterodimers of 2 major proteins, alpha- and beta-tubulins (55 kDa). The amino acid sequence of the tubulins is highly conserved evolutionarily. beta-tubulin gene family consists of 15 to 20 dispersed genes, many of which are processed pseudogenes. Within a vertebrate species, the genes are distinguished by their C-terminal region. The amino acid sequence differences show varying degrees of conservation across species, depending on the isotype. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha-chain. The highly acidic C-terminal region may bind cations such as calcium. The tubulin superfamily includes five distinct families, the alpha-, beta-, gamma-, delta-, and epsilon-tubulins and a sixth family (zeta-tubulin) which is present only in kinetoplastid protozoa.

Alpha and beta-tubulin Undergoes a tyrosination/detyrosination cycle, the cyclic removal and re-addition of a C-terminal tyrosine residue by the enzymes tubulin tyrosine carboxypeptidase (TTCP) and tubulin tyrosine ligase (TTL), respectively. Gamma-tubulin is a ubiquitous phylogenetically Gamma is a low abundance protein present within the cells in both various types of microtubule-organizing centers and cytoplasmic protein complexes. It interacts with GCP2 and GCP3. Delta-tubulin is associated with the manchette in the elongating spermatid, a specialized microtubule system present during reshaping of the sperm head. It is localized to Centrosome. Centriole. Cytoplasm. Nucleus. it is cytoplasmic and nuclear. Epsilon-tubulin-epsilon is associated with pericentriolar material.

Tubulin, isolated from bovine brain tissue, is a mixture of undefined isotopes. It is highly homologous to tubulin isolated from other eukaryotic sources. Tubulin polymerizes to form structures called microtubules (MTs).

**Source of Antigen**

Tubulin was purified (>95%) from bovine brain (**#TUBL16-N-100**). Mol wt ~5 kDa. It is supplied in powder form. It can be reconstituted in PBS, pH 7.5 or other buffers for ELISA or other applications.

**Form & Storage of Antibodies/Peptide Control**

**Storage**

**Short-term:** unopened, undiluted liquid vials at -20°C and powder at 4°C or -20°C.

**Long-term:** at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20°C or below.

**Recommended Usage**

**Western Blotting :** tubulin ~55 kDa.

**ELISA:** Control protein can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

**Specificity & Cross-reactivity**

Purified brain tubulin may contain an undefined composition of various isotypes as naturally found in brain.

**References:** (1) Bauman MH (1996) BBRC 219, 238-242; Cowan NJ (1983) Mol Cell Biol. 3, 1738-1745, Olsen JV (2006) Cell 127, 635-648.

\*This product is for In vitro research use only.

**Related material available from ADI**

Antibodies beta-actin , G3PDH and purified proteins

TUBL16-N-100

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