

## Product datasheet for **UM800042**

### Topoisomerase II alpha (TOP2A) Mouse Monoclonal Antibody [Clone ID: UMAB145]

#### Product data:

|                       |  |
|-----------------------|--|
| Product Type:         | Primary Antibodies   |
| Clone Name:           | UMAB145  |
| Applications:         | IF, IHC, WB  |
| Recommended Dilution: | IHC 1:200  |
| Reactivity:           | Human, Mouse, Rat  |
| Host:                 | Mouse  |
| Isotype:              | IgG1   |
| Clonality:            | Monoclonal   |
| Immunogen:            | Human recombinant protein fragment corresponding to amino acids 1100-1531 of human TOP2A(NP_001058) produced in E.coli.  |
| Formulation:          | PBS (pH 7.3) containing 1% BSA, 50% glycerol and 0.02% sodium azide.   |
| Concentration:        | 0.5~1.0 mg/ml (Lot Dependent)  |
| Purification:         | Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)  |
| Conjugation:          | Unconjugated   |
| Storage:              | Store at -20°C as received.  |
| Stability:            | Stable for 12 months from date of receipt.   |
| Gene Name:            | DNA topoisomerase II alpha   |
| Database Link:        | <a href="#">NP_001058</a><br><a href="#">Entrez Gene 21973 Mouse</a> <a href="#">Entrez Gene 360243 Rat</a> <a href="#">Entrez Gene 7153 Human</a><br><a href="#">P11388</a> |



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**Background:**

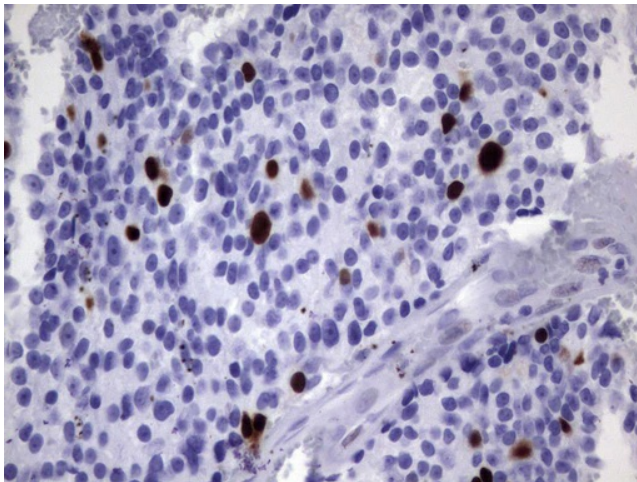
This gene encodes a DNA topoisomerase, an enzyme that controls and alters the topologic states of DNA during transcription. This nuclear enzyme is involved in processes such as chromosome condensation, chromatid separation, and the relief of torsional stress that occurs during DNA transcription and replication. It catalyzes the transient breaking and rejoining of two strands of duplex DNA which allows the strands to pass through one another, thus altering the topology of DNA. Two forms of this enzyme exist as likely products of a gene duplication event. The gene encoding this form, alpha, is localized to chromosome 17 and the beta gene is localized to chromosome 3. The gene encoding this enzyme functions as the target for several anticancer agents and a variety of mutations in this gene have been associated with the development of drug resistance. Reduced activity of this enzyme may also play a role in ataxia-telangiectasia. [provided by RefSeq, Jul

**Synonyms:**

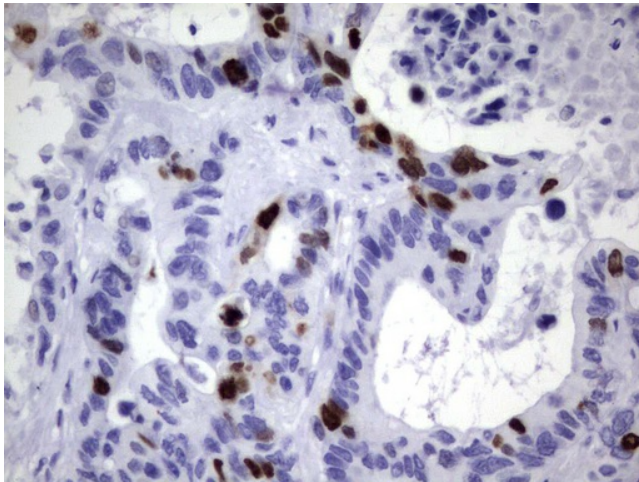
TOP2; TOP2alpha; TOPIIA; TP2A

**Protein Families:**

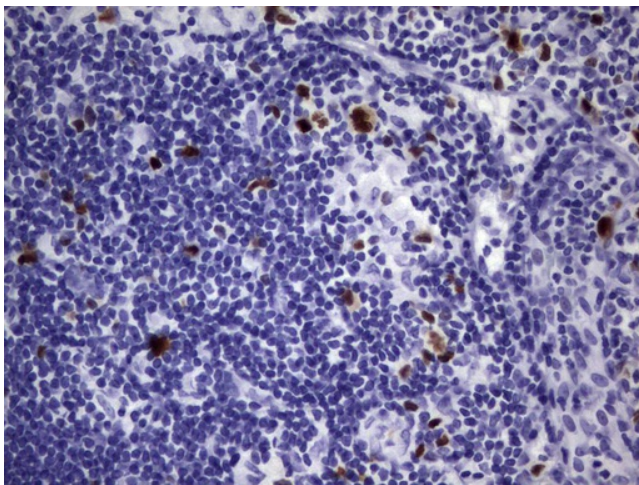
Druggable Genome

**Product images:**

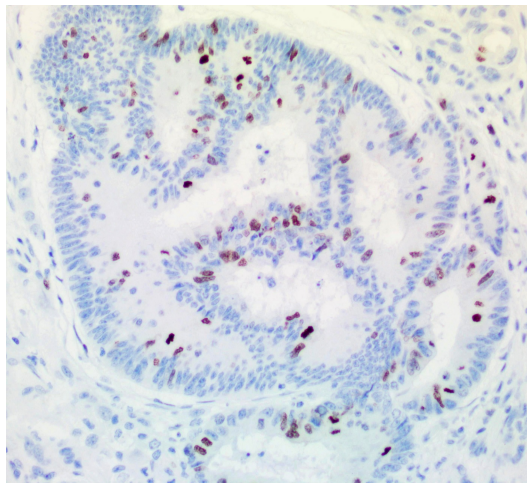
Immunohistochemical staining of paraffin-embedded Adenocarcinoma of Human breast tissue using anti-TOP2A mouse monoclonal antibody. (UM800042; heat-induced epitope retrieval by 1mM EDTA in 10mM Tris, pH9.0, 120°C for 3min)



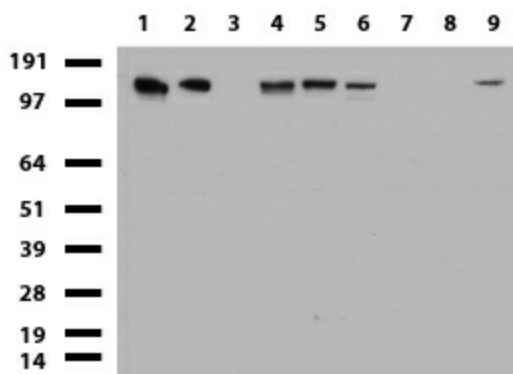
Immunohistochemical staining of paraffin-embedded Human colon tissue using anti-TOP2A mouse monoclonal antibody. (UM800042; heat-induced epitope retrieval by 1mM EDTA in 10mM Tris, pH9.0, 120°C for 3min)



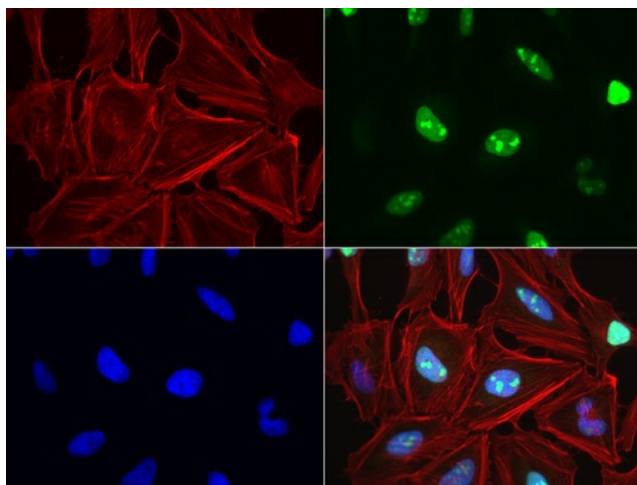
Immunohistochemical staining of paraffin-embedded Human lymphoma tissue using anti-TOP2A mouse monoclonal antibody. (UM800042; heat-induced epitope retrieval by 1mM EDTA in 10mM Tris, pH9.0, 120°C for 3min)



Immunohistochemical staining of paraffin-embedded human colon cancer using anti-TOP2A clone UMAB145 mouse monoclonal antibody at 1:333 with Polink2 Broad HRP DAB detection kit ([UM500076]; heat-induced epitope retrieval with Accel buffer (B22C, pH8.5))



Western blot of cell lysates (35ug) from 9 different cell lines (1: HepG2, 2: HeLa, 3: SV-T2, 4: A549, 5: COS7, 6: Jurkat, 7: MDCK, 8: PC-12, 9: MCF7). Dilution: 1:500



Immunofluorescent staining of HeLa cells using anti-TOP2A mouse monoclonal antibody (UM800042, green, 1:100). Actin filaments were labeled with Alexa Fluor® 594 Phalloidin (red), and nuclear with DAPI (blue).