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Product datasheet for TA301543

LC3B (MAP1LC3B) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	Electron Microscopy, FC, ICC/IF, IHC, Immunoblotting, IP, Simple Western, WB
Recommended Dilution:	Immunoblotting, Knockdown Validated, Flow Cytometry: 1:200, Immunohistochemistry Free-Floating, Knockout Validated, Immunoprecipitation, Immunocytochemistry/ Immunofluorescence, Simple Western: 1:100, Western Blot: 1:1000, Immunohistochemistry-Paraffin: 1:200-1:400, Immunohistochemistry-Frozen: 1:400, Electron Microscopy, Immunohistochemistry
Reactivity:	Human, Mouse
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	A synthetic peptide made to the N-terminal region of the human LC3, isoform B protein.
Formulation:	Tris-glycine, 150mM NaCl and 0.05% sodium azide
Purification:	peptide affinity purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	microtubule associated protein 1 light chain 3 beta
Database Link:	NP_073729 Entrez Gene 67443 MouseEntrez Gene 81631 Human Q9GZQ8

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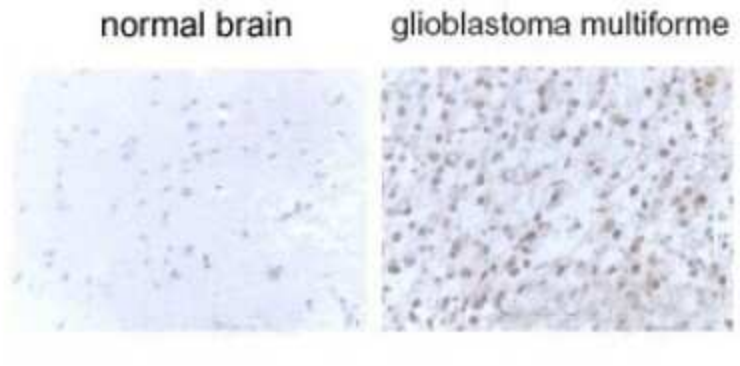
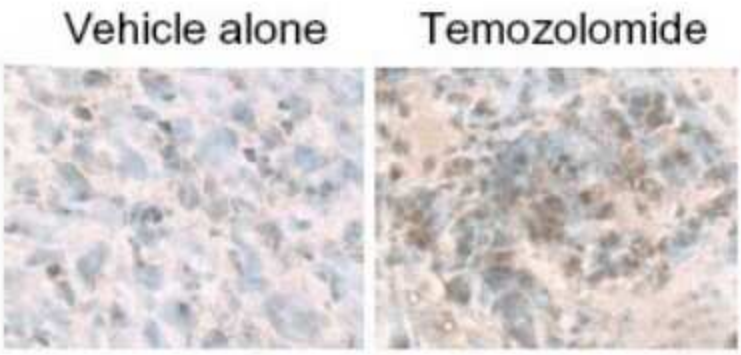
Background: Autophagy is a process of intracellular bulk degradation in which cytoplasmic components, including organelles, are sequestered within double-membrane vesicles that deliver the contents to the lysosome/vacuole for degradation. During macroautophagy, the sequestering vesicles, termed autophagosomes, fuse with the lysosome or vacuole resulting in the delivery of an inner vesicle (autophagic body) into the lumen of the degradative compartment. There are 16 proteins participating in the autophagy pathway in humans. The autophagy protein LC3, a mammalian homologue of Atg8, was originally identified as microtubule-associated protein 1 light chain 3. It is a component of both the MAP1A and MAP1B microtubule-binding domains and the heavy-chain independent regulation of LC3 expression may modify MAP1 microtubule-binding activity during development. LC3 is the only known mammalian protein identified that stably associates with the autophagosome membranes. LC3-I is cytosolic and LC3-II is membrane bound and enriched in the autophagic vacuole fraction. The detection of LC3-I to LC3-II conversion is a useful and sensitive marker for distinguishing autophagy in mammalian cells.

Synonyms: 1BLC3; ATG8F; LC3B; MAP1A; MAP1LC3B-a

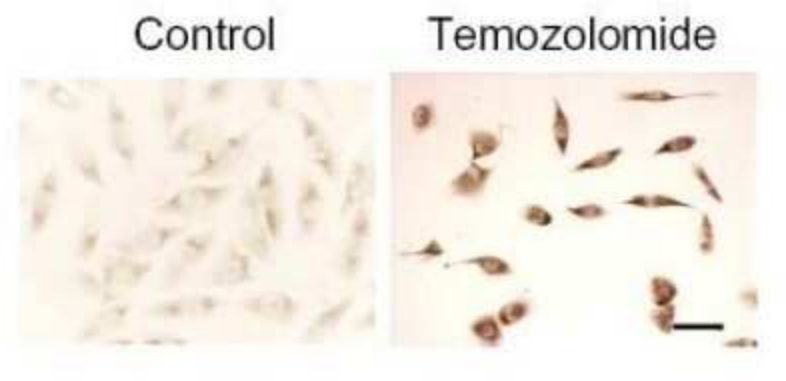
Product images:



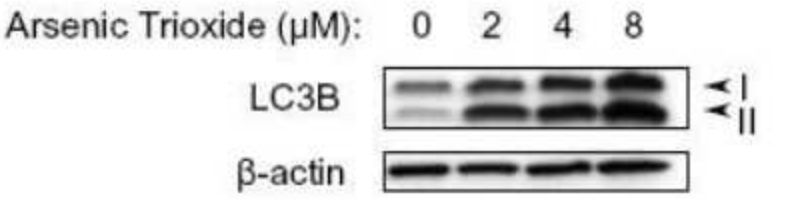
LC3B staining in glioblastoma multiform tissue.



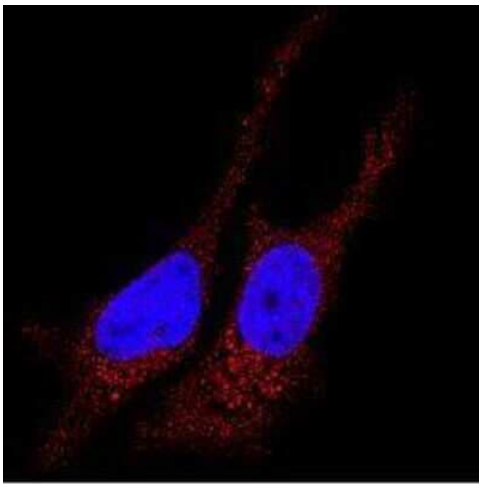
LC3B staining in treated U87-MG cultured & subcutaneous tumors.



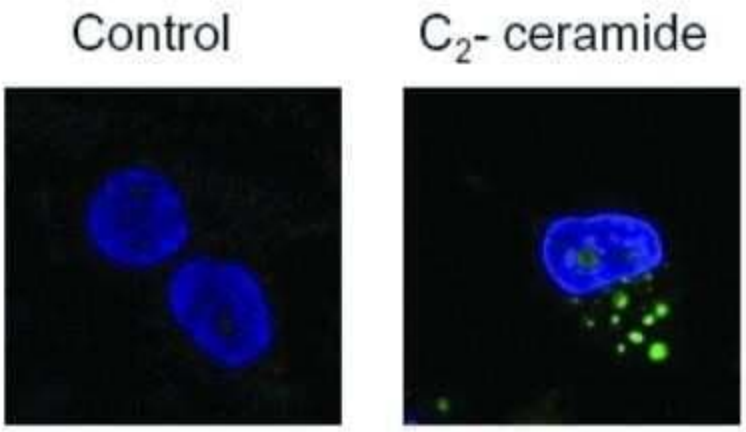
Staining of treated U373-MG (human glioblastoma) cells using anti- [Catalog # TA301543.



Analysis of LC3B in treated U87-MG (human glioblastoma astrocytoma) lysates using anti- [Catalog # TA301543.

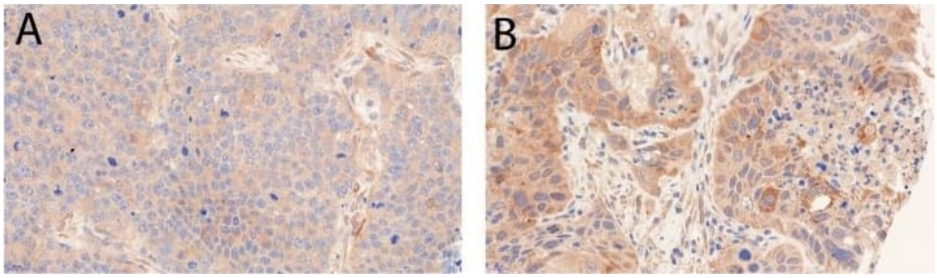


Analysis of LC3B in HeLa cells using anti-LC3B antibody (red) [Catalog # TA301543. Nuclei were counterstained with DAPI (blue).

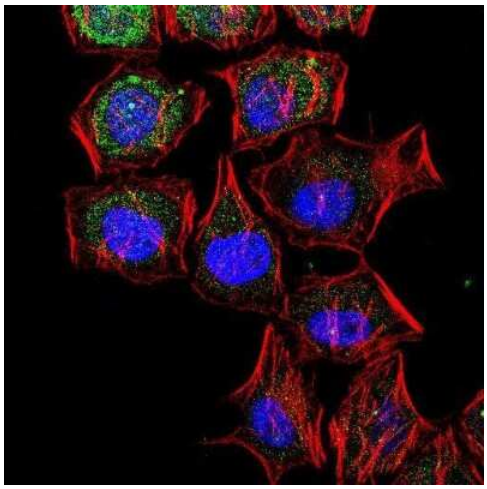


Immunocytochemical/Immunofluorescent staining of treated U373-MG cells using the HRP conjugate of anti- (Catalog # TA301543). The nuclei were stained with DAPI.

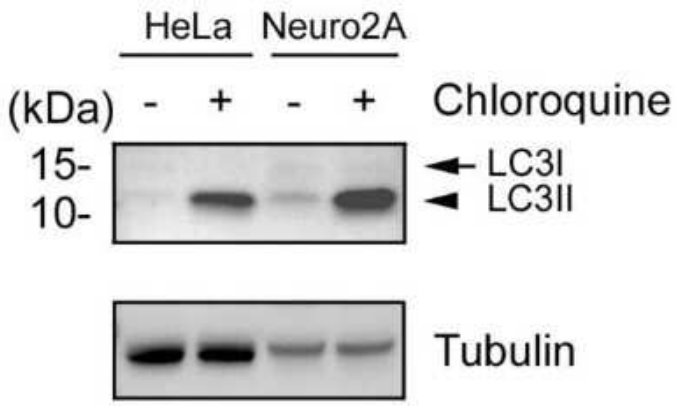
Lane view shows a specific band for LC3B in 0.5 mg/ml of Neuro2A lysate at a molecular weight of approximately 15 kDa. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



Examples of immunohistochemical stainings; (A) LC3B low, (B) LC3B high, (C) p62 low (any cellular compartment), (D) p62 cytoplasmic low, (E) p62 cytoplasmic/dot like high, nuclear low, (F) p62 cytoplasmic/dot like low, nuclear high, (G) HMGB1 low, (H) HMGB1 high. Objective magnification, 40×.



Confocal analysis of HeLa cells using Rabbit anti-LC3B antibody (Catalog # TA301543, 1:5). An Alexa Fluor 488-conjugated Goat to rabbit IgG was used as secondary antibody (green). Actin filaments were labeled with Alexa Fluor 568 phalloidin (red). DAPI was used to stain the cell nuclei (blue).



Human cervical carcinoma (HeLa) and Mouse Neuroblast cells (Neuro2a) were treated with (+) and without (-) 50 uM Chloroquine overnight. Whole cell protein lysates were prepared in 1x Laemmli sample buffer and approximately 10 ug of each lysate (NBP2-49689 and NBP2-49688) was separated on a 4- 20% gel by SDS-PAGE, transferred to 0.2 um PVDF membrane and blocked in 5% nonfat milk in TBST. The membrane was probed with 2 ug/mL anti-LC3 (TA301543) and 1 ug/mL anti-alpha tubulin (NB100-690) as a loading control, and detected with the appropriate secondary antibodies using NovaLume Pico Chemiluminescence Substrate (NBP2-61915).