

Anti-beta III Tubulin antibody [5G8] ab231084

KO 評価済

1 References 画像数 4

製品の概要

| | |
|--------------|---|
| 製品名 | Anti-beta III Tubulin antibody [5G8] |
| 製品の詳細 | Mouse monoclonal [5G8] to beta III Tubulin |
| 由来種 | Mouse |
| アプリケーション | 適用あり: ICC/IF, IHC-P, WB |
| 種交差性 | 交差種: Mouse, Rat, Human |
| 免疫原 | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| エピトープ | The epitope recognized by 5G8 is EAQGPK |
| ポジティブ・コントロール | ICC/IF: HAP1 WT cells. IHC-P: FFPE human cerebellum and rat cerebellum tissue sections. WB: HAP1, Neuro2a and PC12 cell lysates |
| 特記事項 | <p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p> |

製品の特性

| | |
|-------|---|
| 製品の状態 | Liquid |
| 保存方法 | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle. |
| バッファー | Preservative: 0.02% Sodium azide Constituent: PBS |
| 精製度 | Protein G purified |
| ポリ/モノ | モノクローナル |

| | |
|--------|-------|
| クローン名 | 5G8 |
| アイソタイプ | IgG1 |
| 軽鎖の種類 | kappa |

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab231084の使用に適用されます**
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

| アプリケーション | Abreviews | 特記事項 |
|----------|-----------|--|
| ICC/IF | | Use a concentration of 1 µg/ml. |
| IHC-P | | Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |
| WB | | Use a concentration of 1 µg/ml. Detects a band of approximately 55 kDa (predicted molecular weight: 50 kDa). |

ターゲット情報

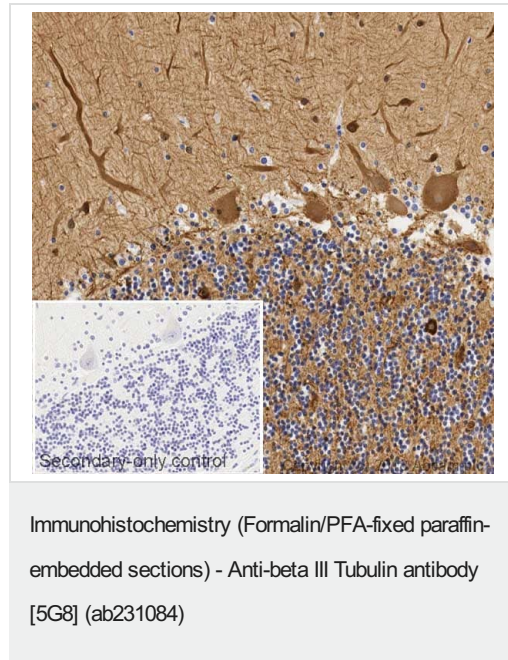
| | |
|-------|--|
| 機能 | Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha-chain. TUBB3 plays a critical role in proper axon guidance and maintenance. |
| 組織特異性 | Expression is primarily restricted to central and peripheral nervous system. |
| 関連疾患 | Defects in TUBB3 are the cause of congenital fibrosis of extraocular muscles type 3A (CFEOM3A) [MIM:600638]. A congenital ocular motility disorder marked by restrictive ophthalmoplegia affecting extraocular muscles innervated by the oculomotor and/or trochlear nerves. It is clinically characterized by anchoring of the eyes in downward gaze, ptosis, and backward tilt of the head. Congenital fibrosis of extraocular muscles type 3 presents as a non-progressive, autosomal dominant disorder with variable expression. Patients may be bilaterally or unilaterally affected, and their oculo-motility defects range from complete ophthalmoplegia (with the eyes fixed in a hypo- and exotropic position), to mild asymptomatic restrictions of ocular movement. Ptosis, refractive error, amblyopia, and compensatory head positions are associated with the more severe forms of the disorder. In some cases the ocular phenotype is accompanied by additional features including developmental delay, corpus callosum agenesis, basal ganglia dysmorphism, facial weakness, polyneuropathy. |
| 配列類似性 | Belongs to the tubulin family. |
| ドメイン | The highly acidic C-terminal region may bind cations such as calcium. |
| 翻訳後修飾 | Some glutamate residues at the C-terminus are polyglutamylated. This modification occurs exclusively on glutamate residues and results in polyglutamate chains on the gamma-carboxyl group. Also monoglycylated but not polyglycylated due to the absence of functional TLL10 in human. Monoglycylation is mainly limited to tubulin incorporated into axonemes (cilia and flagella) whereas glutamylation is prevalent in neuronal cells, centrioles, axonemes, and the mitotic spindle. Both modifications can coexist on the same protein on adjacent residues, and lowering glycylation levels increases polyglutamylated, and reciprocally. The precise function of such |

modifications is still unclear but they regulate the assembly and dynamics of axonemal microtubules.

細胞内局在

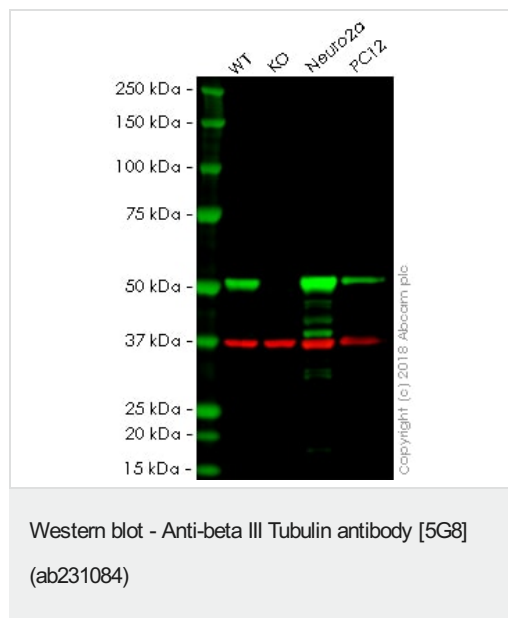
Cytoplasm > cytoskeleton.

画像



IHC image of beta III Tubulin staining in a section of formalin-fixed paraffin-embedded normal human cerebellum performed on a Leica BOND™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab231084, 1ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



All lanes :

Lane 1 : HAP1 whole cell lysate

Lane 2 : HAP1 TUBB3 knockout whole cell lysate

Lane 3 : Neuro2a whole cell lysate

Lane 4 : PC12 whole cell lysate

Lysates/proteins at 20 µg per lane.

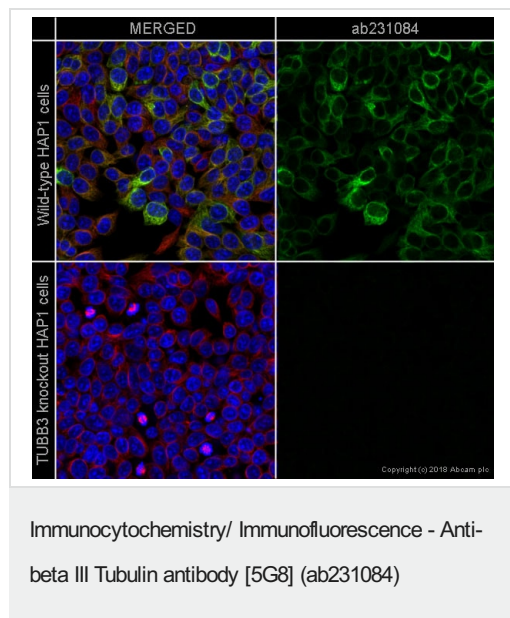
Performed under reducing conditions.

Predicted band size: 50 kDa

Observed band size: 55 kDa

ab231084 was shown to specifically react with beta III Tubulin (TUBB3) in wild type HAP1 cells. No band was observed when beta III Tubulin (TUBB3) knockout samples were used. Wild-type and beta III Tubulin (TUBB3) knockout samples were subjected to SDS-PAGE. ab231084 and [ab181602](#) (Rabbit anti GAPDH) were

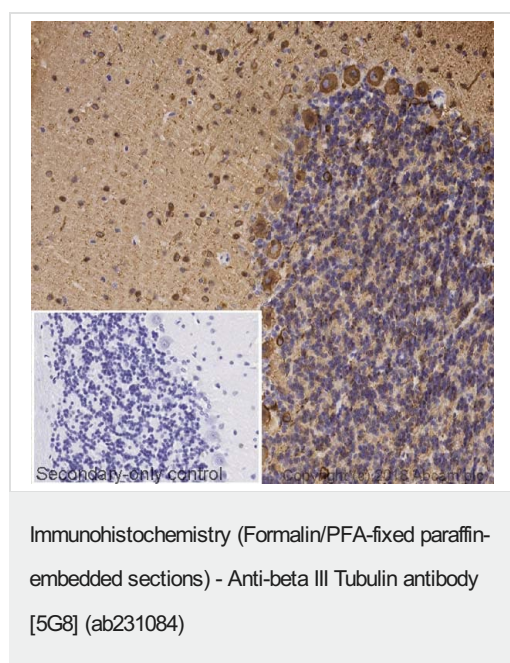
incubated overnight at 4°C at 1 µg/ml and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



ab231084 staining beta III tubulin (shown in green) in wild-type HAP1 cells (top panel) and TUBB3 knockout HAP1 cells (bottom panel).

The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 mins and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab231084 at 1 µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control, at 1/1000 dilution. Cells were then incubated with **ab150117**, Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (shown in green) and **ab150084**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolor red). Nuclear DNA was labeled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



IHC image of beta III Tubulin staining in a section of formalin-fixed paraffin-embedded normal rat cerebellum performed on a Leica BOND™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab231084, 1 µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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