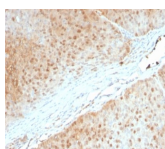


# AKT1 Monoclonal Mouse Antibody (AKT1/2552)



## Product Description

This antibody recognizes a protein of 62 kDa, which is identified as AKT1. The serine/threonine kinase Akt family contains several members, including Akt1 (also designated PKB or RacPK), Akt2 (also designated PKBbeta or RacPK-beta) and Akt3 (also designated PKB-gamma or thymoma viral proto-oncogene 3), which exhibit sequence homology with the protein kinase A and C families and are encoded by the c-Akt proto-oncogene. All members of the Akt family have a Pleckstrin homology domain. Akt1 and Akt2 are activated by PDGF stimulation. This activation is dependent on PDGFR-beta tyrosine residues 740 and 751, which bind the subunit of the phosphatidylinositol 3-kinase (PI 3-kinase) complex. Activation of Akt1 by insulin or insulin-growth factor-1 (IGF-1) results in phosphorylation of both Thr 308 and Ser 473. Akt proteins become phosphorylated and activated in insulin/IGF-1-stimulated cells by an upstream kinase(s), and the activation of Akt1 and Akt2 is inhibited by the PI kinase inhibitor wortmannin.

Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the [CF® Dye Brochure](#) for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors.

**Stock status:** Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email [order@biotium.com](mailto:order@biotium.com) to inquire about stock status and lead times before placing your order.

**Catalog number key for antibody number 2552, Anti-AKT1 (AKT1/2552)**

## Product attributes

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| research-areas                        | Apoptosis, Cell cycle, Signal transduction                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Antibody number                       | #2552                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Antibody reactivity (target)          | AKT1                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Antibody type                         | Primary                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Host species                          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Clonality                             | Monoclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Clone                                 | AKT1/2552                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Isotype                               | IgG2b, kappa                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Molecular weight                      | 62 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Synonyms                              | AKT1; PKB; Protein Kinase B Alpha; RAC-alpha serine/threonine-protein kinase                                                                                                                                                                                                                                                                                                                                                                                |
| Human gene symbol                     | AKT1                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Entrez gene ID                        | 207                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| SwissProt                             | P31749                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Unigene                               | 525622                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Immunogen                             | Recombinant fragment of human AKT1 protein (around aa 85-189) (exact sequence is proprietary)                                                                                                                                                                                                                                                                                                                                                               |
| Antibody target cellular localization | Cytoplasmic, Plasma membrane, Nucleus                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Verified antibody applications        | IHC (FFPE) (verified), WB (verified)                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Species reactivity                    | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Antibody application notes            | Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody. Immunohistochemistry (formalin): 1-2 ug/mL for 30 minutes at RT. Staining of formalin-fixed tissues requires boiling tissue sections in 10 mM citrate buffer, pH 6.0, for 10-20 minutes followed by cooling at RT for 20 minutes. Optimal dilution for a specific application should be determined by user |
| Positive control                      | PDGF-treated NIH/3T3 cells. HeLa cell lysates. Human pancreas or cervical carcinoma.                                                                                                                                                                                                                                                                                                                                                                        |
| Shipping condition                    | Room temperature                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Storage Conditions                    | Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C                                                                                                                                                                                                                                                                                                                                             |
| Shelf life                            | Guaranteed for at least 24 months from date of receipt when stored as recommended                                                                                                                                                                                                                                                                                                                                                                           |
| Regulatory status                     | For research use only (RUO)                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Antibody/conjugate formulation        | Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA. Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide                                                                                                                                                                                                                                                           |
| Validated in protein array            | Monospecific                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Antibody research areas               | Apoptosis, Cell cycle, Signal transduction                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Product origin                        | Product may contain either bovine serum albumin (BSA) from bovine serum (Bos taurus), or recombinant BSA produced in Chinese hamster ovary cells. Inquire for the specific lot.                                                                                                                                                                                                                                                                             |

| Antibody # prefix | Conjugation        | Ex/Em (nm) | Laser line | Detection channel        | Dye Features                     |
|-------------------|--------------------|------------|------------|--------------------------|----------------------------------|
| BNC04             | CF®405S            | 404/431    | 405        | DAPI (microscopy), AF405 | <a href="#">CF®405S Features</a> |
| BNC88             | CF®488A            | 490/515    | 488        | GFP, FITC                | <a href="#">CF®488A Features</a> |
| BNC68             | CF®568             | 562/583    | 532, 561   | RFP, TRITC               | <a href="#">CF®568 Features</a>  |
| BNC94             | CF®594             | 593/614    | 561        | Texas Red®               | <a href="#">CF®594 Features</a>  |
| BNC40             | CF®640R            | 642/662    | 633-640    | Cy®5                     | <a href="#">CF®640R Features</a> |
| BNC47             | CF®647             | 650/665    | 633-640    | Cy®5                     | <a href="#">CF®647 Features</a>  |
| BNC74             | CF®740             | 742/767    | 633-685    | 775/50                   | <a href="#">CF®740 Features</a>  |
| BNCB              | Biotin             | N/A        | N/A        | N/A                      |                                  |
| BNUB              | Purified           | N/A        | N/A        | N/A                      |                                  |
| BNUM              | Purified, BSA-free | N/A        | N/A        | N/A                      |                                  |

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