

# Product Datasheet

## FKBP52/FKBP4 Antibody (Hi52C) - BSA Free NB110-96874

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

[www.novusbio.com](http://www.novusbio.com)



[technical@novusbio.com](mailto:technical@novusbio.com)

### Publications: 1

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:  
[www.novusbio.com/NB110-96874](http://www.novusbio.com/NB110-96874)

Updated 9/9/2025 v.20.1

Earn rewards for product  
reviews and publications.

Submit a publication at [www.novusbio.com/publications](http://www.novusbio.com/publications)

Submit a review at [www.novusbio.com/reviews/destination/NB110-96874](http://www.novusbio.com/reviews/destination/NB110-96874)



**NB110-96874**

FKBP52/FKBP4 Antibody (Hi52C) - BSA Free

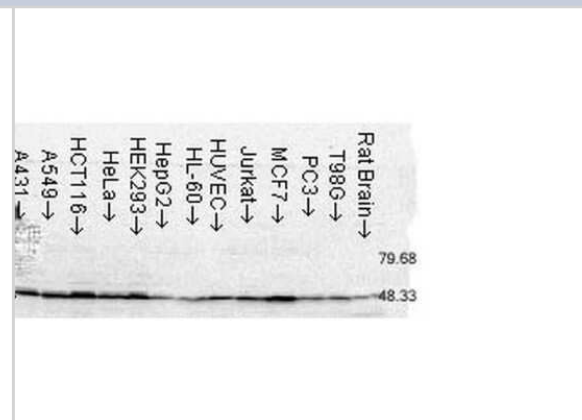
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	Hi52C
Preservative	0.09% Sodium Azide
Isotype	IgG2a
Purity	Protein G purified
Buffer	PBS, 50% Glycerol

Product Description	
Description	Novus Biologicals Mouse FKBP52/FKBP4 Antibody (Hi52C) - BSA Free (NB110-96874) is a monoclonal antibody validated for use in IHC, WB, ICC/IF and IP. Anti-FKBP52/FKBP4 Antibody: Cited in 1 publication. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	2288
Gene Symbol	FKBP4
Species	Human, Mouse, Rat, Canine, Hamster
Specificity/Sensitivity	Detects approx 52kDa. Heavy chain migrates close to FKBP52 on SDS PAGE.
Immunogen	Synthetic peptide corresponding to the residues of human FKBP52

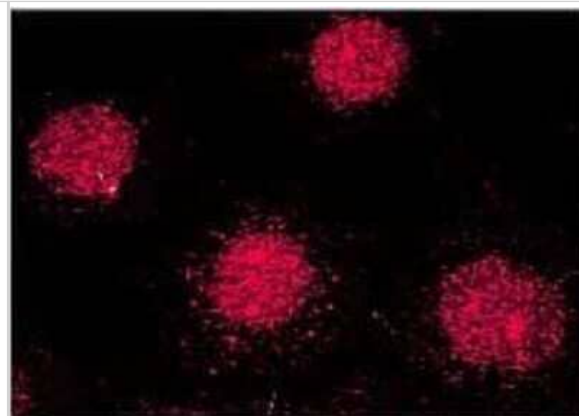
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunoprecipitation
Recommended Dilutions	Western Blot 1:2000, Immunohistochemistry 1:250, Immunocytochemistry/Immunofluorescence 1:1000, Immunoprecipitation 5ug, Immunohistochemistry-Paraffin 1:250
Application Notes	0.5 ug/ml was sufficient for detection of FKBP52 in 20 ug total protein using WB by colorimetric immunoblot analysis using Goat Anti-Mouse IgG:HRP as the secondary.FKBP52 Antibody.

**Images**

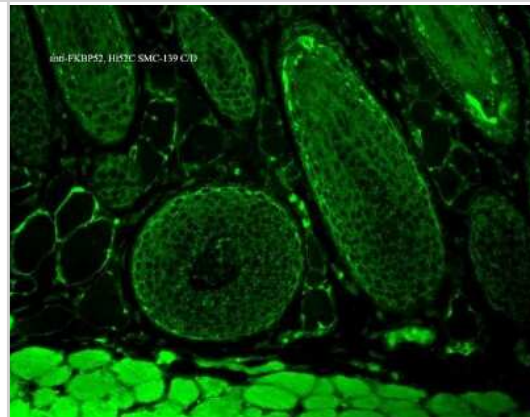
Western Blot: FKBP52/FKBP4 Antibody (Hi52C) [NB110-96874] - Western Blot analysis of Human Cell lysates showing detection of FKBP52/FKBP4 protein using Mouse Anti-FKBP52/FKBP4 Monoclonal Antibody, Clone Hi52C (NB110-96874). Load: 15 ug. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-FKBP52/FKBP4 Monoclonal Antibody (NB110-96874) at 1.5 ug/mL for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.



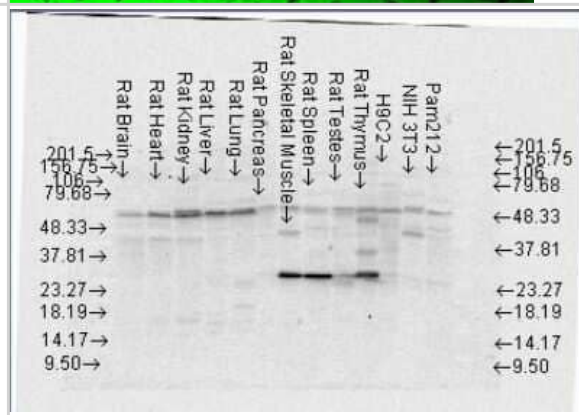
Immunocytochemistry/Immunofluorescence: FKBP52/FKBP4 Antibody (Hi52C) [NB110-96874] - Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-FKBP52/FKBP4 Monoclonal Antibody, Clone Hi52C (NB110-96874). Tissue: MCF-7 cells (metastatic mammary gland/breast cell line). Species: Human. Primary Antibody: Mouse Anti-FKBP52/FKBP4 Monoclonal Antibody (NB110-96874) at 1:1000. Secondary Antibody: APC Goat Anti-Mouse (red). Courtesy of: Tom Ratajczak, Univ. of W. Australia.



Immunohistochemistry: FKBP52/FKBP4 Antibody (Hi52C) [NB110-96874] - Immunohistochemistry analysis using Mouse Anti-FKBP52/FKBP4 Monoclonal Antibody, Clone Hi52C (NB110-96874). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-FKBP52/FKBP4 Monoclonal Antibody (NB110-96874) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Epidermis.

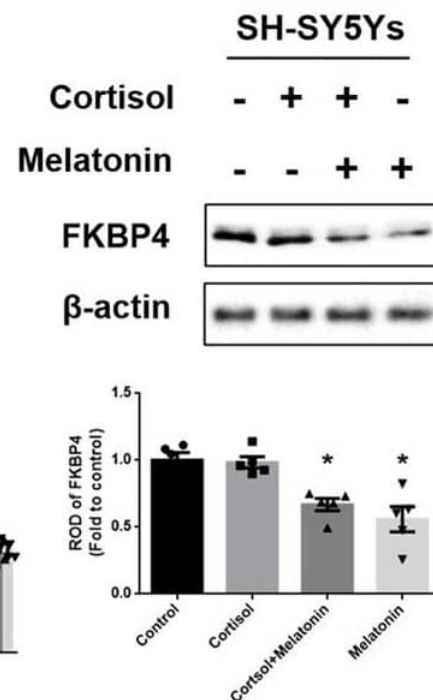


Western Blot: FKBP52/FKBP4 Antibody (Hi52C) [NB110-96874] - analysis of Rat Brain, Heart, Kidney, Liver, Pancreas, Skeletal muscle, Spleen, Testes, Thymus cell lysates showing detection of FKBP52 protein using Mouse Anti-FKBP52 Monoclonal Antibody, Clone Hi52C. Load: 15 ug protein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-FKBP52 Monoclonal Antibody at 1.5 ug/mL for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.



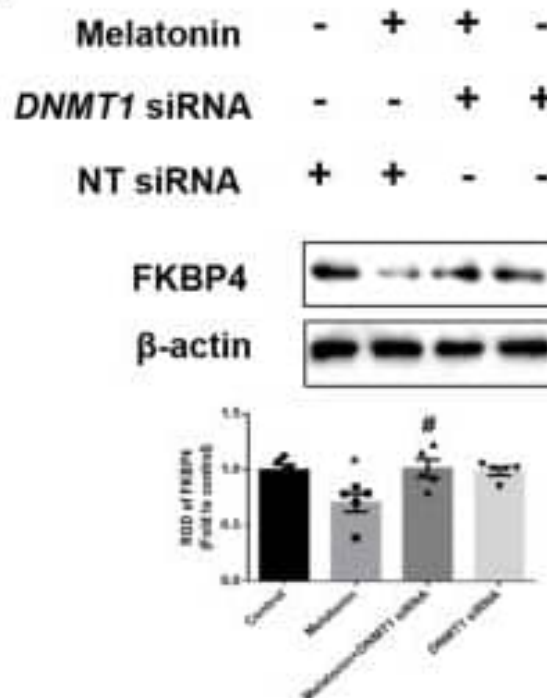
Melatonin downregulates FKBP4, but is not related to phosphorylation of GR. A–C, F SH-SY5Y cells were treated with melatonin (1  $\mu$ M) for 30 min and then with cortisol (1  $\mu$ M) for 24 h. A The expression of p-GR and GR were detected by western blot. Loading control is  $\beta$ -actin. n = 5. B The expression of GR protein in subcellular fraction samples was detected by western blotting. Lamin A/C and  $\alpha$ -tubulin were used as a nuclear and cytosolic loading control, respectively. n = 5. C The cells were immunostained with GR (green) and DAPI (blue). Scale bars, 10  $\mu$ m (magnification,  $\times$ 1000). n = 5. D, G Mice were injected with melatonin (10 mg/kg) and then with corticosterone (10 mg/kg) for 7 days. D Slide samples for immunohistochemistry were immunostained with GR (green) and DAPI (blue). Scale bars, 140  $\mu$ m (magnification,  $\times$ 100). n = 5. E SH-SY5Y cells were treated with melatonin for 30 min and then with cortisol for 12 h. The mRNA expression of regulatory proteins related to cytosolic GR complex, dynein complex, and NPC were analyzed by real time PCR. n = 5. F, G FKBP4 was detected by western blot. Loading control is  $\beta$ -actin. n = 5. All blots and immunofluorescence images are representative. The representative images were acquired by SRRF imaging system. All data are presented as a mean  $\pm$  S.E.M. \* $p$  < 0.05 versus control, # $p$  < 0.05 versus cortisol or corticosterone. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/36810730>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

F



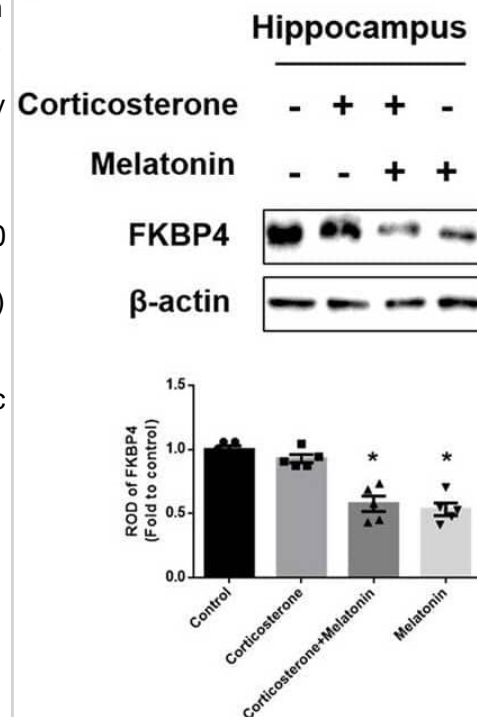
DNMT1-mediated epigenetic downregulation of FKBP4 by melatonin reverses cortisol-induced mitochondrial dysfunction. A, B SH-SY5Y cells were treated with melatonin (1  $\mu$ M) for 30 min and then with cortisol (1  $\mu$ M) for 12 h. A Dot blot assay was performed through DNA extraction. The methylation level was confirmed through 5-mc antibody. n = 5. B The methylation status of the CpG region of the FKBP52 was confirmed in extracted gDNA. n = 5. C The cells were transfected with NT siRNA or DNMT1 siRNA for 24 h before melatonin treatment for 12 h. The mRNA expression of FKBP52 were analyzed by quantitative real time PCR. n = 5. D The cells were transfected with NT siRNA or DNMT1 siRNA for 24 h before melatonin treatment for 24 h. FKBP4 levels were detected by western blot. Loading control is  $\beta$ -actin. n = 5. E The cells were transfected with NT siRNA or DNMT1 siRNA for 24 h before melatonin or cortisol treatment for 24 h. Flow cytometry was used to measure mitochondrial mass by Mitotracker green staining. n = 5. F The cells were transfected with NT siRNA or DNMT1 siRNA for 24 h before melatonin or cortisol treatment for 48 h. Flow cytometry was used to detect mitochondrial membrane potential by TMRE staining. n = 5. G The cells were transfected with NT siRNA or DNMT1 siRNA 24 h before melatonin or cortisol treatment for 72 h. Annexin V/PI staining was performed to detect cell apoptosis. n = 5. All blots and fluorescence images are representative. All data are presented as a mean  $\pm$  S.E.M. \* $p$  < 0.05 versus control or control + NT siRNA, # $p$  < 0.05 versus melatonin + NT siRNA or cortisol + NT siRNA, and \$ $p$  < 0.05 versus cortisol and melatonin + NT siRNA. NS means non-staining. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/36810730>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

D



Melatonin downregulates FKBP4, but is not related to phosphorylation of GR. A–C, F SH-SY5Y cells were treated with melatonin (1  $\mu$ M) for 30 min and then with cortisol (1  $\mu$ M) for 24 h. A The expression of p-GR and GR were detected by western blot. Loading control is  $\beta$ -actin. n = 5. B The expression of GR protein in subcellular fraction samples was detected by western blotting. Lamin A/C and  $\alpha$ -tubulin were used as a nuclear and cytosolic loading control, respectively. n = 5. C The cells were immunostained with GR (green) and DAPI (blue). Scale bars, 10  $\mu$ m (magnification,  $\times$ 1000). n = 5. D, G Mice were injected with melatonin (10 mg/kg) and then with corticosterone (10 mg/kg) for 7 days. D Slide samples for immunohistochemistry were immunostained with GR (green) and DAPI (blue). Scale bars, 140  $\mu$ m (magnification,  $\times$ 100). n = 5. E SH-SY5Y cells were treated with melatonin for 30 min and then with cortisol for 12 h. The mRNA expression of regulatory proteins related to cytosolic GR complex, dynein complex, and NPC were analyzed by real time PCR. n = 5. F, G FKBP4 was detected by western blot. Loading control is  $\beta$ -actin. n = 5. All blots and immunofluorescence images are representative. The representative images were acquired by SRRF imaging system. All data are presented as a mean  $\pm$  S.E.M. \* $p$  < 0.05 versus control, # $p$  < 0.05 versus cortisol or corticosterone. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/36810730>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

G



## Publications

Kim MJ, Choi GE, Chae CW et al. Melatonin-mediated FKBP4 downregulation protects against stress-induced neuronal mitochondria dysfunctions by blocking nuclear translocation of GR Cell death & disease 2023-02-21 [PMID: 36810730] (IHC, WB, PLA, Human)



### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Products Related to NB110-96874**

---

NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-96778	Mouse IgG2a Isotype Control (M2A)

---

### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

For more information on our 100% guarantee, please visit [www.novusbio.com/guarantee](http://www.novusbio.com/guarantee)

Earn gift cards/discounts by submitting a review: [www.novusbio.com/reviews/submit/NB110-96874](http://www.novusbio.com/reviews/submit/NB110-96874)

Earn gift cards/discounts by submitting a publication using this product:  
[www.novusbio.com/publications](http://www.novusbio.com/publications)

