



# Mouse anti-Human $\beta$ -Spectrin II monoclonal antibody, clone 53 (CABT-B9368)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Immunogen</b>	Human $\beta$ -Spectrin II aa. 2101-2189
<b>Isotype</b>	IgG1
<b>Source/Host</b>	Mouse
<b>Species Reactivity</b>	Human, Mouse, Rat, Dog
<b>Clone</b>	53
<b>Purification</b>	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	WB; IF
<b>Format</b>	Liquid
<b>Concentration</b>	250 $\mu$ g/ml
<b>Size</b>	50 $\mu$ g, 150 $\mu$ g
<b>Buffer</b>	Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09\%$ sodium azide.
<b>Storage</b>	Store undiluted at -20°C.

## BACKGROUND

<b>Introduction</b>	Spectrins are central components of the cytoskeleton that form a scaffold below the plasma
---------------------	--

membrane. Spectrins contain two subunits,  $\alpha$  and  $\beta$ , which intertwine to form heterodimers that can self associate into elongated tetramers.  $\alpha$ -spectrin I and  $\beta$ -spectrin I form heterodimers in red blood cells, while nonerythroid mammalian cells contain heterodimers of  $\alpha$ -spectrin I and II with  $\beta$ -spectrin I to V. The structure of spectrins includes a succession of triple-helical repeats alongwith various domains, such as SH3 domain, EF hands, PH domains, and binding domains for ankyrin, actin, band 4.1, and calmodulin.  $\alpha$ -spectrin II is a widely expressed non-erythroid  $\alpha$ -spectrin that contains an SH3 domain, a calmodulin binding site, and two cleavage sites for proteases, such as calpains and caspase-3.  $\beta$ -spectrin II is a widely expressed non-erythroid  $\beta$ -spectrin that contains a C-terminal region that interacts with  $\alpha$ -spectrins and a PH domain.  $\alpha$ -spectrin II and  $\beta$ -spectrin II, like many other spectrins, can form heterodimers that can self associate into tetramers, as well as interact with Band 4.1, F-actin, and other proteins near the plasma membrane. This scaffold of cytoskeletal and plasma membrane proteins is critical for the maintenance of cell structure.

---

<b>Keywords</b>	SPTBN2; spectrin, beta, non-erythrocytic 2; SCA5; SCAR14; GTRAP41; spectrin beta chain, non-erythrocytic 2; beta-III spectrin; spectrin beta III sigma 2; spectrin beta chain, brain 2; spinocerebellar ataxia 5 protein; spectrin, non-erythroid beta chain 2; glutamate transporter EAAT4-associated protein 41;
-----------------	--

---

## GENE INFORMATION

---

Entrez Gene ID	<a href="#">6712</a>
----------------	----------------------

---

UniProt ID	<a href="#">O15020</a>
------------	------------------------

---