

Human, rat and mouse 4 repeat tau forms and epitope maps for EnCor and other monoclonal antibodies

Human	MAEPRQEFVEMEDHAGTYGLGDRKDGQGGYTMHQDQEGDTDAGLKE SPLQTPTEDGSEEPG	60
Mouse	MADPRQEFDTMEDHAGD-----YTLLQDQEGDMDHGLKESPPQPPADDGAEEPG	49
Rat	MAEPRQEFDTMEDQAGD-----YTMLQDQEGDMDHGLK-----	33
	**:	
Human	SETSDAKSTPTAEDVVTAPLVDEGAPGKQAAAQPHEIPEEGTTAEEAGIGDTPSLEDEAAG	120
Mouse	SETSDAKSTPTAEDVVTAPLVDERAPDKQAAAQPHEIPEGLITAAEEAGIGDTPNQEDQAAG	109
Rat	-----AEEAGIGDTPNMEDQAAG	51
	*****:*:*:*:*:	
	<---MCA4F10--->	
Human	HVTQARMVSKSKDGTGSDDKKAKGADGKT KIATPRGAA PPGQKQANATRIIPAKTPPA	178
Mouse	HVTQARVA--SKDRTGNDEKKAKGADGKTGAKIATPRGAASPAQKGTSNATRIIPAKTTPS	167
Rat	HVTQARVAGVSKDRTGNDEKKAKGADGKTGAKIATPRGAATPGQKGTSNATRIIPAKTTPS	111
	*****:	
	<-----AT8----->	
Human	PKTPPSSGEPKSGDRSGYSSPGSPGTPGSRSRTPSLPTPTREPKKVAVVRTPPKSPSS	238
Mouse	PKTPPGSGEPKSGERSGYSSPGSPGTPGSRSRTPSLPTPTREPKKVAVVRTPPKSPSA	
Rat	PKTPPGSGEPKSGERSGYSSPGSPGTPGSRSRTPSLPTPTREPKKVAVVRTPPKSPSA	171
	*****:	
	<-----MTR#1----->	
Human	AKSRLQTAPVPMPLKLVKSKIIGSTENLKHQPGGGKVQIINKKLDLSNVQSKCGSKDNIK	298
Mouse	SKSRLQTAPVPMPLKLVRSKIIGSTENLKHQPGGGKVQIINKKLDLSNVQSKCGSKDNIK	287
Rat	SKSRLQTAPVPMPLKLVRSKIIGSTENLKHQPGGGKVQIINKKLDLSNVQSKCGSKDNIK	231
	:*****:	
	<---MCA2E9--->	
	KDRVQSKIGSLD	
	MTR#2>	
Human	HVPGGGSVQIVYKPVVLSKVTSKCGSLGNIIHHPGGGQVEVKSEKLDKDRVQSKIGSLD	358
Mouse	HVPGGGSVQIVYKPVVLSKVTSKCGSLGNIIHHPGGGQVEVKSEKLDKDRVQSKIGSLD	
Rat	HVPGGGSVQIVYKPVVLSKVTSKCGSLGNIIHHPGGGQVEVKSEKLDKDRVQSKIGSLD	291
	*****:	
	<-----MCA5B10----->	
	HVPGGKNKKIETHKLTFRFN	
	MCA2E9->	
	NITHVPGG	
	-MTR#4->	
Human	NITHVPGGKNKKIETHKLTFRFNNAKAKTDHGAEIVYKSPVVSQDTSRHLNSVSSSTGSD	418
Mouse	NITHVPGGKNKKIETHKLTFRFNNAKAKTDHGAEIVYKSPVVSQDTSRHLNSVSSSTGSD	
Rat	NITHVPGGKNKKIETHKLTFRFNNAKAKTDHGAEIVYKSPVVSQDTSRHLNSVSSSTGSD	351
	*****:	
Human	MVDSPLATLADEVASLAKQGL	441
Mouse	MVDSPLATLADEVASLAKQGL	430
Rat	MVDSPLATLADEVASLAKQGL	374
	*****:	

Alignment of EnCor recombinant human four repeat tau with two rodent isoforms. The four microtubule binding peptide repeats (MTR) are highlighted in yellow and appropriately indicated. The epitopes for two EnCor mouse monoclonal antibodies, **MCA-2E9** and **MCA-5B10**, are located in or next to the fourth MTR repeat in a highly conserved region expressed in all tau isoforms. Location of the phospho-epitopes for MCA-4F10 (highlighted in green) and AT8 (highlighted in blue) are also shown with phospho-amino acids indicated in red.