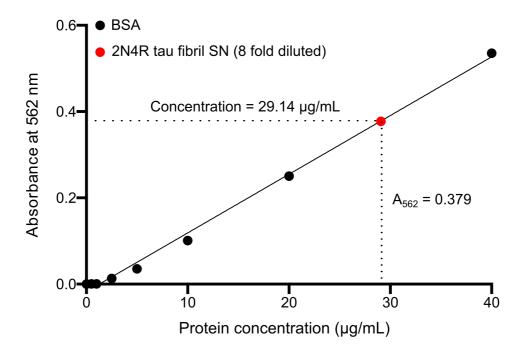
Supplementary information for

Co-factor-free aggregation of tau into seeding-competent RNAsequestering amyloid fibrils

Pijush Chakraborty, Gwladys Rivière, Shu Liu, Alain Ibáñez de Opakua, Riza Dervişoğlu, Alina Hebestreit, Loren B. Andreas, Ina M. Vorberg and Markus Zweckstetter



Concentration of 2N4R tau before aggregation = 1.146 mg/mL Concentration of 2N4R tau in SN = (29.14 x 8) μ g/mL = 0.233 mg/mL \sim 80 % 2N4R tau aggregated

Supplementary Fig. 1 Determination of the concentration of 2N4R tau present in the supernatant (SN; red dot; 8-fold dilution) after aggregation in the absence of heparin. Concentrations were determined using the BCA assay. Absorbance values, which were detected for BSA standard solutions with known concentrations, are shown in black.

LQTAPVPMPDLK	563.3665 563.3668 431.2404 431.2383 431.2396 431.2394 431.2394 431.2393 431.2398 431.2397 431.2382 431.2382	1,324.72 1,324.72 860.4663 860.4621 860.4646 860.4643 860.464 860.464	2 2 2 2 2 2 2 2	1085120 488941 8.25E+07 4.33E+07 3.77E+07 7759340	KLDLSNVQSK KLDLSNVQSK KLDLSNVQSK KLDLSNVQSK KLDLSNVQSK	566.325 377.8875 566.3237 377.8856	1,130.64 1,130.64 1,130.63 1,130.63	2 3 2	688486 1543860 1.02E+07
IGSTENLK	431.2404 431.2383 431.2396 431.2394 431.2393 431.2398 431.2397 431.2382	860.4663 860.4621 860.4646 860.4643 860.464 860.4651	2 2 2 2 2	8.25E+07 4.33E+07 3.77E+07	KLDLSNVQSK KLDLSNVQSK	566.3237	1,130.63	2	1.02E+07
IGSTENLK	431.2383 431.2396 431.2394 431.2393 431.2398 431.2397 431.2382	860.4621 860.4646 860.4643 860.464 860.4651	2 2 2 2	4.33E+07 3.77E+07	KLDLSNVQSK				
IGSTENLK	431.2396 431.2394 431.2393 431.2398 431.2397 431.2382	860.4646 860.4643 860.464 860.4651	2 2 2	3.77E+07		377.8856	1 130 63	2	
IGSTENLK	131.2394 131.2393 131.2398 131.2397 131.2382	860.4643 860.464 860.4651	2		KLDLSNVQSK		1,130.03	3	1.48E+07
IGSTENLK	131.2393 131.2398 131.2397 131.2382	860.464 860.4651	2	7759340		377.8873	1,130.64	3	1270980
IGSTENLK	131.2398 131.2397 131.2382	860.4651			KLDLSNVQSK	377.8866	1,130.64	3	2090420
IGSTENLK	131.2397 131.2382		_	1.84E+07	KLDLSNVQSK	377.8857	1,130.64	3	8531420
IGSTENLK 43 IGSTENLK 43 IGSTENLK 43	131.2382		2	5.58E+07	KLDLSNVQSK	566.3245	1,130.63	2	564889
IGSTENLK 43 IGSTENLK 43		860.4648	2	370087	KLDLSNVQSK	377.887	1,130.64	3	1.03E+08
IGSTENLK 43	131.2389	860.4618	2	899899	KLDLSNVQSK	566.3256	1,130.64	2	424992
		860.4632	2	623917	KLDLSNVQSK	377.8865	1,130.64	3	1810990
IIGSTENLK 4-	131.2384	860.4623	2	451482	KLDLSNVQSK	377.8867	1,130.64	3	5202380
	131.2404	860.4663	2	380415	KLDLSNVQSK	566.3248	1,130.64	2	389941
	131.2386	860.4627	2	846224	KLDLSNVQSK	566.3263	1,130.64	2	2100210
	508.2739	1,521.80	3	259432	KLDLSNVQSK	377.8846	1,130.63	3	3.19E+07
	381.4566	1,521.80	4	184486	KLDLSNVQSK	377.8861	1,130.64	3	2383330
	159.2663	1,374.78	3	4335000	KLDLSNVQSK	377.8848	1,130.63	3	1.29E+08
	159.2674	1,374.78	3	887532	KLDLSNVQSK	377.8873	1,130.64	3	3748570
	159.2677	1,374.78	3	490639	KLDLSNVQSK	377.8847	1,130.63	3	2.92E+07
	159.2662	1,374.78	3	712940	KLDLSNVQSK	566.3254	1,130.64	2	398022
	159.2674	1,374.78	3	397008	KLDLSNVQSK	377.8855	1,130.63	3	8.94E+07
	121.7779	841.5412	2	1974720	KLDLSNVQSK	377.8847	1,130.63	3	787084
	121.7784	841.5423	2	2.86E+07	KLDLSNVQSK	377.885	1,130.63	3	3073160
	121.7774	841.5402	2	5661730	KLDLSNVQSK	377.8874	1,130.64	3	4185900
	121.7774	841.5402	2	2975050	KLDLSNVQSK	377.8843	1,130.63	3	9419510
	121.7784	841.5423	2	517547	KLDLSNVQSK	377.8844	1,130.63	3	8.83E+07
	421.779	841.5434	2	2.54E+07	KLDLSNVQSK	377.8846	1,130.63	3	1.60E+07
	121.7782	841.5419	2	1.11E+07	KLDLSNVQSK	377.8857	1,130.64	3	1774280
	121.7787	841.5428	2	2.52E+07	KLDLSNVQSK	377.886	1,130.64	3	1.05E+07
	121.7789	841.5432	2	881426	KLDLSNVQSK	377.8846	1,130.63	3	1374120
	121.7775	841.5404	2	2254640	KLDLSNVQSK	566.3251	1,130.64	2	357209
	121.7777	841.5408	2	2.51E+07	KLDLSNVQSK	566.3255	1,130.64	2	245725
	121.7781	841.5415	2	2.88E+07	KLDLSNVQSK	566.3232	1,130.63	2	389543
	121.7788	841.5431	2	1766970	KLDLSNVQSK	377.8852	1,130.63	3	1125230
	421.778	841.5414	2	1.80E+07	KLDLSNVQSK	566.3254	1,130.64	2	234322
	121.7773	841.5401	2	5624820	KLDLSNVQSK	566.3273	1,130.64	2	442197
	121.7789	841.5432	2	3.11E+07	KLDLSNVQSK	566.3274	1,130.64	2	240791
	421.778	841.5415	2	1221890	LDLSNVQSK	502.2765	1,002.54	2	1.10E+08
	121.7782 121.7779	841.5418 841.5412	2	423916	LDLSNVQSK LDLSNVQSK	502.2768 502.2781	1,002.54 1,002.54	2	2.53E+07
	121.7775	841.5404	2	447356 459569	LDLSNVQSK	502.2781	1,002.54	2	2.82E+07
		841.5431	2	536818	LDLSNVQSK	502.2783	1,002.54	2	1.07E+07 534743
	121.7788		4		LDLSNVQSK	502.2776		2	3000260
	157.5269 372.2438	1,826.08 742.4731	2	623597 1779580	LDLSNVQSK	502.2748	1,002.53 1,002.54	2	3.65E+07
	372.2438	742.4719	2	1993940	LDLSNVQSK	502.2748	1,002.54	2	5150750
	158.7625	915.5105	2	1086550	LDLSNVQSK	502.2776	1,002.54	2	708110
	666.3255	1,130.64	2	1.44E+07	LDLSNVQSK	502.2777	1,002.54	2	1712560
	666.3273	1,130.64	2	3897200	LDLSNVQSK	502.2777	1,002.54	2	2509220
	566.326	1,130.64	2	7390680	LDLSNVQSK	502.2787	1,002.54	2	777637
	566.3244	1,130.63	2		LDLSNVQSK	502.2791	1,002.54	2	639433
	566.3249	1,130.64	2	1.12E+08	LDLSNVQSK	502.2792	1,002.54	2	1122120
	566.3258	1,130.64	2	1482140	LDLSNVQSK	502.2781	1,002.54	2	328470
	666.3266	1,130.64	2	1472020	LDLSNVQSK	502.2778	1,002.54	2	345601
	566.323	1,130.63	2	4895010	LDLSNVQSK	502.2767	1,002.54	2	951925
	666.3239	1,130.63	2	1.53E+07	LDLSNVQSK	502.2763	1,002.54	2	407844
	666.3268	1,130.64	2	996572	CGSKDNIK	461.229	920.4434	2	1325970
	666.3272	1,130.64	2	1049920	CGSKDNIK	461.2292	920.4438	2	1558090
	666.3276	1,130.64	2	5839370	CGSKDNIK	461.2301	920.4455	2	1260580
	566.324	1,130.63	2	3.11E+07	CGSKDNIK	461.2299	920.4452	2	1359890
	666.3257	1,130.64	2	1630260	CGSKDNIK	461.229	920.4434	2	928951
	566.3244	1,130.63	2	1.17E+07	DNIKHVPGGGSVQIVYKPVDLSK	613.3406	2,449.33	4	402953
	566.327	1,130.64	2	621179	HVPGGGSVQ	419.2169	836.4192	2	5175300
	666.3265	1,130.64	2	1641550	HVPGGGSVQIVY	606.8246	1,211.63	2	5196730
	666.3248	1,130.64	2	7.11E+07	HVPGGGSVQIVY	606.8227	1,211.63	2	1927530
	66.3248	1,130.64	2	3.45E+07	HVPGGGSVQIVY	606.8281	1,211.64	2	607544
	666.3266	1,130.64	2	2668430	HVPGGGSVQIVY	606.8248	1,211.64	2	658417

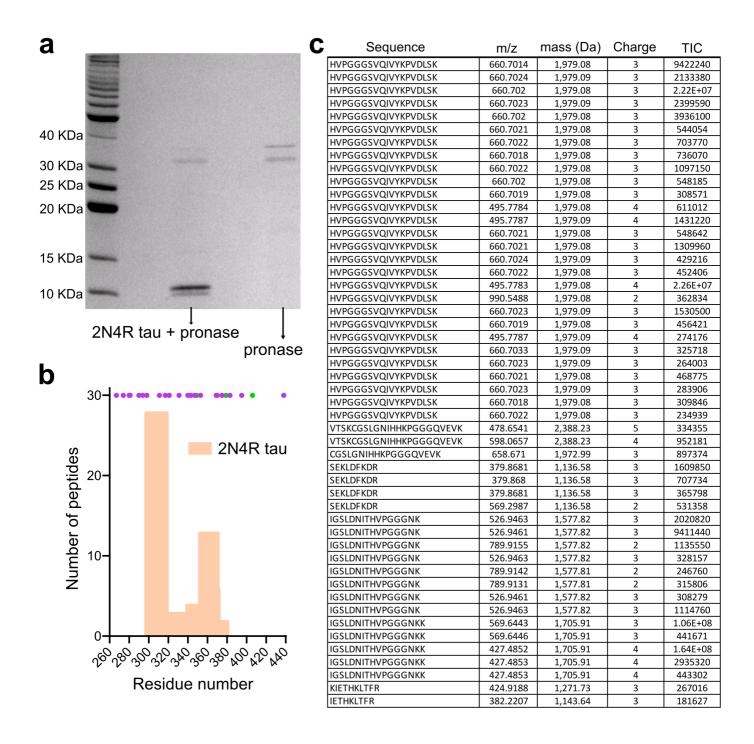
MYPGGGSVQHYK	Sequence	Observed m/z	Absolute mass (Da)	Charge	TIC	Sequence	Observed m/z	Absolute mass (Da)	Charge	TIC
IMPRGGSSYQIVYK	HVPGGGSVQIVYK	447.5846	1,339.73	3	3309080	CGSLGNIHHK	374.8553	1,121.54	3	889273
NPPGGGSYUPYK	HVPGGGSVQIVYK	447.5861	1,339.74	3	1744260	CGSLGNIHHKPGGGQVEVK	658.672	1,972.99	3	1137040
NPPGGGSVQIVYK	HVPGGGSVQIVYK	447.5854	1,339.73		2346670	CGSLGNIHHKPGGGQVEVK	658.6739	1,973.00	3	1327920
NPGGGSYQIVYKPVDLS 588 977			<u> </u>		+		+			992953
INPROGESSYOLPHYPOUR			· ·			· · · · · · · · · · · · · · · · · · ·	+			
NPPGGGSVQWYKPULS	· · · · · · · · · · · · · · · · · · ·		<u> </u>			l 	+			
IMPRIGES/DIVIPAYURS		+								
HPROGGSVILVYRPVILSK 990.5541 1,979.09 2 3740000 HPROGGSVILVYRPVILSK 990.557 1,979.10 4 2,29020 1,979.00 3 374000 1,979.00 3 374000 1,979.00 3 3,970.00 3 3,970.00 4 2,2970.00 1,979.00 3 3,970.00 4 2,2970.00 4,979.00 3 3,970.00 4 2,2970.00 4,979.00 3 3,970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4 2,2970.00 4			-					 		
HAPPGGGSVOLVYKPVICKS 495,7817 1,979.10 4 227800.0								 		
HPROGGSVILVIKPRUSK 399.587							+	 		
MPRGGSVIDVINEMPOLSC 499.7825 1.979.10	· · · · · · · · · · · · · · · · · · ·					1	+	 ' 		
HYPEGGSVQMYKPVDLSK 495-7829 1,979.10	· · · · · · · · · · · · · · · · · · ·	+								
MPDGGSVQVYKPUDISK 495,783 1,979.10		+	-							
HYPOGGSYQIVYKPVDISK 696,7048 1,979.09 4 294559	HVPGGGSVQIVYKPVDLSK	495.783		4	2371390			 		
IMPRGGSVQIVKPVDISK 495.7805 1,979.09 3 1,991.00 3 999.1910	HVPGGGSVQIVYKPVDLSK	660.7048	1,979.09	3	3.59E+08					
HMPDGGSVQWYKPVDLSK	HVPGGGSVQIVYKPVDLSK	495.7805	1,979.09	4	2914550		+	- '		
HMPCGGSVQIVYEPUDISK 495,783 1,979.10 4 347800 CGSIGNIHHKPGGSQIVEVK 494,2576 1,973.00 4 631635 HMPCGGSVQIVYEPUDISK 495,7821 1,979.10 4 334400 CGSIGNIHHKPGGSQIVEVK 494,2575 1,973.00 4 631635 HMPCGGSVQIVYEPUDISK 495,7813 1,979.10 4 2,576.07 CGSIGNIHHKPGGSQIVEVK 494,2575 1,973.00 4 3016150 CGSIGNIHHKPGGSQIVEVK 494,2586 1,973.00 4 2,976.00 CGSIGNIHHKPGGGQIVEVK 494,2586 494,2586 494,2586 494,2586 494,2586 494,2586 494,2586 494,2586 494,2586 494,2586 494,258	HVPGGGSVQIVYKPVDLSK	660.7063	1,979.10	3	9921910					
HPPGGGSVQIVKPVDISK 495.7822 1,979.10 4 433490 HPPGGGSVQIVKPVDISK 660.7051 1,979.09 3 1.48E-108 HPPGGGSVQIVKPVDISK 660.7051 1,979.09 3 1.48E-108 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 4 1.11E-107 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 4 1.28E-107 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 4 1.28E-107 HPPGGGSVQIVKPVDISK 495.7821 1,979.09 4 7.49E-107 HPPGGGSVQIVKPVDISK 495.7821 1,979.09 4 7.49E-107 HPPGGGSVQIVKPVDISK 660.7058 1,979.09 4 7.49E-107 HPPGGGSVQIVKPVDISK 660.7058 1,979.09 4 2.57E-108 HPPGGGSVQIVKPVDISK 495.7821 1,979.09 4 6.33E-107 HPPGGGSVQIVKPVDISK 495.7821 1,979.09 4 6.33E-107 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 3 1.23E-107 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 3 1.23E-107 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 3 1.23E-107 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 4 2.598980 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 4 2.159700 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 4 2.159700 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 4 2.159700 HPPGGGSVQIVKPVDISK 495.7821 1,979.10 3 1.17E-107 HPPG	HVPGGGSVQIVYKPVDLSK		· ·	4				 	4	1971720
HPPGGGSVQIVKPVDLSK 60,7051 1,979.09 3 1.48E-08 1,978.10 1,979.09 3 1.48E-08 1,978.10 1,979.10 4 1,11E-07 1,979.09 1,979.10 4 1,11E-07 1,979.10 4 1,11E-07 1,979.10 4 1,11E-07 1,979.10 1,979.10 4 1,11E-07 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.10 1,979.1			-			CGSLGNIHHKPGGGQVEVK	494.2567	1,973.00	4	631635
HPPGGGSVQIVYKPVDLSK			· ·			CGSLGNIHHKPGGGQVEVK	494.2575	1,973.00	4	3016150
INPGGGSVQIVKPVDLSK	· · · · · · · · · · · · · · · · · · ·		-			CGSLGNIHHKPGGGQVEVK	494.2559	1,972.99	4	2382460
HYPGGGSVQIVKPVDLSK 495.7821 1,979.09 4 2,846-07 HYPGGGSVQIVKPVDLSK 660.7036 1,979.09 3 4,476-08 HYPGGGSVQIVKPVDLSK 495.78 1,979.09 4 6,638-07 HYPGGGSVQIVKPVDLSK 600.7036 1,979.09 4 6,638-07 HYPGGGSVQIVKPVDLSK 600.7036 1,979.09 4 6,638-07 HYPGGGSVQIVKPVDLSK 600.7032 1,979.09 3 1,438-08 HYPGGGSVQIVKPVDLSK 600.7032 1,979.09 4 6,638-07 HYPGGGSVQIVKPVDLSK 600.7052 1,979.09 3 1,438-08 HYPGGGSVQIVKPVDLSK 495.781 1,979.09 4 2,589.90 HYPGGGSVQIVKPVDLSK 495.781 1,979.09 4 2,589.90 HYPGGGSVQIVKPVDLSK 495.781 1,979.09 4 2,589.90 HYPGGGSVQIVKPVDLSK 495.782 1,979.09 2 7,801.890 HYPGGGSVQIVKPVDLSK 495.782 1,979.09 2 7,801.890 HYPGGGSVQIVKPVDLSK 495.782 1,979.09 1 3 1,178-07 HYPGGGSVQIVKPVDLSK 495.782 1,979.09 2 7,801.890 HYPGGGSVQIVKPVDLSK 495.782 1,979.10 3 1,178-07 HYPGGGSVQIVKPVDLSK 590.592 1,979.10 3 1,178-07 HYPGGGSVQIVKPVDLSK 600.702 1,179.00 3 1,178-07 HYPGGGSVQIVKPVDLSK 600.702 1,179.10 1 3 1,178-07 HYPGGGSVQIVKPVDLSK 600.702 1,179.10 1 3 1,178-07 HYPGGGSVQIVKPVDLSK 600.702 1,179.10 1 3 1,178-07 HYPGGGSV			<u> </u>		+	CGSLGNIHHKPGGGQVEVK	494.2588	1,973.01	4	1049420
HNPGGGSVQIVKPVDLSK						CGSLGNIHHKPGGGQVEVK		1,973.01		1020780
HYPGGGSVQIVYKPVDLSK 495.78			<u> </u>							
HYPGGGSVQIVYKPVDLSK 495.780			· ·				+	- '		
HIPPGGGSVQIVYKPVDLSK 660.7083 1,979.09 4 6.33E-07 HIPPGGGSVQIVYKPVDLSK 660.7083 1,979.09 3 1,43E-08 499.788 997.5615 2 93,917.00			<u> </u>				+	'		
MPGGGSVQIVYKPVDLSK 660.7053		+	· ·		+			- '		
HVPGGGSVQIVYKPVDLSK 495.7815 1,979.10 4 258390 1,43E+08 1,979.10 4 258390 1,979.10 4 215700 1,979.10 4 215700 1,979.10 4 2,000 1,979.10 4 2,000 1,979.10 4 2,000 1,979.10 4 2,000 1,979.10 4 2,000 1,979.10 3 1,17E+07 1,079.10 4 2,46550 1,079.10 3 1,17E+07 1,079.10 4 2,46550 1,079.10 3 1,17E+07 1,079.10 4 2,46550 1,079.10 3 1,17E+07 1,079.10 3 1,17E+07 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 3 1,17E+07 1,079.10 3 1,17E+07 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 4 2,46550 1,079.10 1,079.10 4 2,46550 1,079.10 1,079.10 1,079.10 1,079.10 1,079.10 1,079.10 1,079.10 1,079.10 1,079.10 1,079.10 1,079.10 1,079.10 1,079.10			-	3						
HyPGGGSVQIVYKPVDLSK 495.7815 1,979.10 4 2583980 2 208380 1 1,979.09 2 208380 1,979.09 4 3,084-08 1,979.09 4 3,084-08 1,979.09 4 3,084-08 1,979.09 4 3,084-08 1,979.09 4 3,084-08 1,979.09 4 3,084-08 1,979.09 4 3,084-08 1,979.09 5,979.10 3 1,176-07 1,979.10 3 1,176-07 1,979.09 2 3,979.09 2 3,979.09 2 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.00 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.00 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.00 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979.09 3 3,979	HVPGGGSVQIVYKPVDLSK	660.7052	1,979.09	3	1.43E+08					
HVPGGGSVQIVYRPULSK 495.7827 1,979.10 4 1259700 HVPGGGSVQIVYRPULSK 495.7827 1,979.10 3 1.17E+07 HVPGGGSVQIVYRPULSK 660.7071 1,979.10 3 1.17E+07 HVPGGGSVQIVYRPULSK 660.7071 1,979.10 3 1.17E+07 HVPGGGSVQIVYRPULSK 660.7071 1,979.10 3 1.17E+07 HVPGGGSVQIVYRPULSK 660.7082 1,979.10 3 1.38E+07 HVPGGGSVQIVYRPULSK 660.7082 1,979.10 3 1.38E+07 HVPGGGSVQIVYRPULSK 660.7085 1,979.10 3 1.38E+07 HVPGGGSVQIVYRPULSK 650.7085 1,979.10 3 1.38E+07 HVPGGGSVQIVYRPULSK 650.7085 1,979.09 3 2311750 GGSVQIVYRPULSK 530.6381 1,588.89 3 1860159 GGSVQIVYRPULSK 530.6366 1,588.89 3 1860159 GGSVQIVYRPVDLSK 530.6366 1,588.89 3 1860159 GGSVQIVYRPVDLSK 530.6366 1,588.89 3 3 2200240 GGSVQIVYRPVDLSK 511.6294 1,531.87 3 3717640 SVQIVYRPVDLSK 492.6227 1,474.85 3 1216430 SVQIVYRPVDLSK 738.4314 1,474.85 2 979506 SVQIVYRPVDLSK 387.9027 1,160.69 3 802924 KVVIDSK 393.7404 785.4662 2 555221 LIVRPQGSSVQIVSK 393.7404 785.4662 2 555221 LIVRPQGSSVQIVSK 393.7404 785.4663 2 579873 KVVIDSK 393.7404 785.4663 2 579873 KVVIDSK 393.7404 785.4668 2 430025 KVVIDSK 393.7407 785.4668 2 430025 KVVIDSK 393.7404 785.4668 2 579873 KVVIDSK 393.7404 785.4668 2 579873 KVVIDSK 393.7404 785.4668 2 430025 KVVIDSK 393.7407 78	HVPGGGSVQIVYKPVDLSK	495.7815	1,979.10	4	2583980		+			
HVPGGGSVQIVYKPVDLSK 495.7801 1,979.09 4 3.08E+08 HVPGGGSVQIVYKPVDLSK 990.5562 1,979.09 2 7861890 1,979.09 4 3.08E+08 HVPGGGSVQIVYKPVDLSK 990.5562 1,979.10 3 1.17E+07 HVPGGGSVQIVYKPVDLSK 990.5562 1,979.10 3 1.17E+07 HVPGGGSVQIVYKPVDLSK 990.5562 1,979.10 3 1.13E+07 HVPGGGSVQIVYKPVDLSK 660.7081 1,979.10 3 1.13E+07 HVPGGGSVQIVYKPVDLSK 660.7081 1,979.10 3 1.13E+07 HVPGGGSVQIVYKPVDLSK 660.7082 1,979.10 3 3.74E+07 HVPGGGSVQIVYKPVDLSK 660.7082 1,979.10 3 3.3E+07 HVPGGGSVQIVYKPVDLSK 590.6381 1,588.89 3 1860150 GGSVQIVYKPVDLSK 590.6381 1,588.89 3 1200240 SGSVQIVYKPVDLSK 590.6381 1,474.85 3 120630 SQVQIVYKPVDLSK 590.6381 1,474.85 3 125630 SQVQIVYKPVDLSK 387.903 1,160.69 3 840.22 SGSVQIVSK 433.7360 SGS.4561 2 1552130 SEKLDFK 433.7363 865.4561 2 1939000 SGSVQIVKPVDLSK 387.903 1,160.69 3 840.22 SGSVQIVKPVDLSK 387.903 1,160.69 3 840.22 SGSVQIVKPVDLSK 393.7415 785.4685 2 568540 SGSVQIVKPVDLSK 393.7415 785.4686 2 568540 SGSVQIVKPVDLSK 393.7415 785.4686 2 568540 SGSVQIVKPVDLSK 393.7415 785.4686 2 568540 SGSVQIVKPVDL	HVPGGGSVQIVYKPVDLSK	990.5507	1,979.09	2	2008380		+			
HYPGGGSVQIVYKPVDLSK 990.5532 1,979.09 2 7801890 HYPGGGSVQIVYKPVDLSK 660.7071 1,979.10 3 1.17E+07 HYPGGGSVQIVYKPVDLSK 660.7081 1,979.10 3 1.13E+07 HYPGGGSVQIVYKPVDLSK 660.7081 1,979.10 3 1.13E+07 HYPGGGSVQIVYKPVDLSK 660.7081 1,979.10 3 1.13E+07 HYPGGGSVQIVYKPVDLSK 660.7082 1,979.10 1 3 3.74E+07 HYPGGGSVQIVYKPVDLSK 660.7082 1,979.10 1 3 3.74E+07 HYPGGGSVQIVYKPVDLSK 660.7083 1,979.10 3 3.74E+07 HYPGGGSVQIVYKPVDLSK 660.7083 1,979.10 3 1.38E+07 HYPGGGSVQIVYKPVDLSK 660.7081 1,979.09 3 2311750 GGSVQIVYKPVDLSK 660.7084 1,979.09 3 2311750 GGSVQIVYKPVDLSK 660.7085 1,979.09 3 2311750 GGSVQIVYKPVDLSK 660.7085 1,979.09 3 2311750 GGSVQIVYKPVDLSK 660.7085 1,599.09 3 2311750 GGSVQIVYKPVDLSK 530.6381 1,588.89 3 46519 GGSVQIVYKPVDLSK 549.6429 1,645.91 3 945519 GGSVQIVYKPVDLSK 510.694 1,531.87 3 3174640 GGSVQIVYKPVDLSK 511.6294 1,531.87 3 3174640 GGSVQIVYKPVDLSK 738.4314 1,474.85 2 979506 SVQIVYKPVDLSK 738.4314 1,474.85 2 979506 SVQIVYKPVDLSK 387.9303 1,160.69 3 880.942 SVQIVKPVDLSK 387.9303 1,160.69 3 880.942 SVQIVKPVDLSK 393.7340 785.4662 2 555221 VYKPVDLSK 393.7340 785.4663 2 5798.73 KPVDLSK 393.7340 785.4663 2 5798.73 KPVDLSK 393.7340 785.4669 2 589794 KPVDLSK 393.7340 785.4669 2 339204 KPVDLSK 393.7342 785.4669 2 339204 KPVDLSK 393.7340 785.4669 2 339204 KPV						· · · · · · · · · · · · · · · · · · ·	+			
HYPGGGSVQIVYKPVDLSK 660.701 1,979.10 3 1.17E+07 HYPGGGSVQIVYKPVDLSK 660.7081 1,979.10 3 1.17E+07 HYPGGGSVQIVYKPVDLSK 660.7082 1,979.10 3 1.17E+07 HYPGGGSVQIVYKPVDLSK 660.7082 1,979.10 3 1.3E+07 HYPGGGSVQIVYKPVDLSK 660.7083 1,979.10 3 3.74E+07 HYPGGGSVQIVYKPVDLSK 660.7083 1,979.10 3 1.3SE+07 HYPGGGSVQIVYKPVDLSK 660.7083 1,979.10 3 1.3SE+07 HYPGGGSVQIVYKPVDLSK 660.7083 1,979.10 3 2311750 HYPGGGSVQIVYKPVDLSK 660.7085 1,979.00 3 2311750 HYPGGGSVQIVYKPVDLSK 660.7085 1,979.00 3 2311750 GGSVQIVYKPVDLSK 660.7085 1,979.00 3 2311750 GGSVQIVYKPVDLSK 500.3661 1,588.89 3 1860150 GGSVQIVYKPVDLSK 530.6361 1,588.89 3 1860150 GGSVQIVYKPVDLSK 530.6366 1,588.89 3 2200240 GGSVQIVYKPVDLSK 530.6366 1,588.89 3 2200240 GGSVQIVYKPVDLSK 511.6291 1,531.87 3 3717640 GGSVQIVYKPVDLSK 511.6291 1,531.87 3 3717640 GGSVQIVYKPVDLSK 492.6227 1,474.85 3 1347090 SVQIVYKPVDLSK 387.932 1,474.84 2 815127 SVQIVYKPVDLSK 388.93 1,474.84 2 815127 SVQIVYKPVDLSK 388.93 1,606.93 3 840122 IVYKPVDLSK 387.930 1,160.69 3 840122 IVYKPVDLSK 393.7405 785.4668 2 568540 10LFKDR 397.2157 792.4164 2 1013110 IVYKPVDLSK 393.7405 785.4663 2 555221 IDFKDR 397.2157 792.4164 2 1013110 IVYKPVDLSK 393.7407 785.4668 2 591744 IDFKDR 397.2157 792.4164 2 1013110 IVKSPVDLSK 393.7340 785.4663 2 591744 IDFKDR 397.2157 792.4164 2 1013110 IVKSPVDLSK 393.7340 785.4668 2 430255 INFVDLSK 393.7340 785.4669 2 364953 IKPVDLSK 393.7340 785.4669 2 4364954 IKPVDLSK 393.7340 785.4669 2 364953 IKPVDLSK 393.7340 785.4669 2 364			· ·							
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NVPGGGSVQIVYKPVDLSK 660.7081 1,979.10 3 1.13E+07		+	<u> </u>		+		+			
NPVFGGGSVQIVYKPVDLSK 660.7082			-			PGGGQVEVK	435.7386	869.4627	2	835934
HVPGGGSVQIVYKPVDLSK						PGGGQVEVK	435.7368	869.459	2	9522350
HVPGGGSVQIVYKPVDLSK			· ·			PGGGQVEVK	435.742	869.4694	2	528237
HVPGGGSVQIVYKPVDLSK 660.7058 1,979.10 3 1.38E+07 HVPGGGSVQIVYKPVDLSK 660.7045 1,979.09 3 2311750 GGGSVQIVYKPVDLSK 549.6429 1,645.91 3 945519 GGSVQIVYKPVDLSK 530.6381 1,558.89 3 1860150 GGSVQIVYKPVDLSK 530.6366 1,588.89 3 2202040 GGSVQIVYKPVDLSK 511.6294 1,531.87 3 3717640 GGSVQIVYKPVDLSK 511.6294 1,531.87 3 1347090 SVQIVYKPVDLSK 511.6294 1,474.85 3 1216430 SVQIVYKPVDLSK 738.4289 1,474.84 2 815127 SVQIVYKPVDLSK 738.4314 1,474.85 2 979506 SVQIVYKPVDLSK 387.9027 1,160.69 3 840122 IVYKPVDLSK 387.903 1,160.69 3 822994 KPVDLSK 393.7412 785.4668 2 558240 KPVDLSK 393.7415 785.4668 2 591744 KPVDLSK 393.7404 785.4663 2 579873 KPVDLSK 393.7404 785.4663 2 579873 KPVDLSK 393.7404 785.4668 2 466148 KPVDLSK 393.7424 785.4699 2 339201 KPVDLSK 393.7426 785.4699 2 3364953 KPVDLSK 393.7426 785.4699 2 3364953 KPVDLSK 393.7426 785.4668 2 364953 KPVDLSK 393.74			<u> </u>		+	GGGQVEVK	387.2131	772.4116	2	322668
HVPGGGSVQIVYKPVDLSK 660.7045 1,979.09 3 2311750 GGGSVQIVYKPVDLSK 549.6429 1,645.91 3 945519 GGSVQIVYKPVDLSK 530.6381 1,588.89 3 1860150 GGSVQIVYKPVDLSK 530.6366 1,588.89 3 2202040 GGSVQIVYKPVDLSK 530.6366 1,588.89 3 2202040 GGSVQIVYKPVDLSK 551.6294 1,531.87 3 3717640 GGSVQIVYKPVDLSK 511.6291 1,531.87 3 3717640 GGSVQIVYKPVDLSK 492.6227 1,474.85 3 1216430 SVQIVYKPVDLSK 738.4289 1,474.85 2 979506 SVQIVYKPVDLSK 387.9027 1,160.69 3 840122 IVYKPVDLSK 387.9027 1,160.69 3 840122 IVYKPVDLSK 393.7412 785.4668 2 387968 KPVDLSK 393.7415 785.4668 2 558521 KPVDLSK 393.7404 785.4663 2 579873 KPVDLSK 393.7407 785.4668 2 43025 KPVDLSK 393.7424 785.4668 2 466148 KPVDLSK 393.7424 785.4669 2 339201 KITHVPGGGNKK 559.6498 1,705.92 3 440431 KITHVPGGSNKK 569.6498 1,705.92 3 42099 KITHVPGGGNKK 569.6498 1,705.92 3 42099 KITHVPGGNKK 569.6498 1,705			· ·				+			
SGSVQIVYKPVDLSK S30.6381 1,588.89 3 1860150 SEKLDFK SSKLDFK										
GGSVQIVYKPVDLSK 530.6366 1,588.89 3 2202040 GGSVQIVYKPVDLSK 511.6294 1,531.87 3 3717640 GGSVQIVYKPVDLSK 511.6291 1,531.87 3 1347090 SVQIVYKPVDLSK 511.6291 1,531.87 3 1347090 SVQIVYKPVDLSK 492.6227 1,474.85 3 1216430 SVQIVYKPVDLSK 738.4289 1,474.85 2 979506 SVQIVYKPVDLSK 738.4314 1,474.85 2 979506 SVQIVYKPVDLSK 492.6235 1,474.85 3 1558740 IVYKPVDLSK 387.9027 1,160.69 3 840122 IVYKPVDLSK 387.903 1,160.69 3 922994 KPVDLSK 393.7412 785.4662 2 555221 KPVDLSK 393.7415 785.4668 2 387968 KPVDLSK 393.7415 785.4668 2 591744 KPVDLSK 393.7404 785.4663 2 591744 KPVDLSK 393.7404 785.4663 2 579873 KPVDLSK 393.7404 785.4668 2 430025 KPVDLSK 393.7407 785.4668 2 466148 KPVDLSK 393.7407 785.4668 2 466148 KPVDLSK 393.7427 785.4668 2 466148 KPVDLSK 393.7427 785.4669 2 339201 KPVDLSK 393.7428 785.4699 2 339201 KPVDLSK 393.7424 785.4699 2 339201 KPVDLSK 393.7424 785.4702 2 816433 KELDFK 433.7367 865.4588 2 752230 SEKLDFK 433.7367 865.4588 2 7525130 SEKLDFK 433.7364 865.4566 2 1552130 SEKLDFK 433.7364 865.4566 2 1552130 SEKLDFK 433.7364 865.456 2 173546 SEKLDFK 433.7364 865.456 2 173546 SEKLDFK 433.7364 865.456 2 173546 SEKLDFK 433.7364 865.456 2 173546 SEKLDFK 433.7364 865.456 2 173546 SEKLDFK 433.7364 865.456 2 173546 SEKLDFK 433.7367 865.4581 2 173546 SEKLDFK 433.7364 865.456 2 173540 SEKLDFK 433.7364 8	GGGSVQIVYKPVDLSK	549.6429	1,645.91	3	945519					
SGSVQIVYKPVDLSK 1,531.87 3 3717640 5VQIVYKPVDLSK 511.6294 1,531.87 3 1347090 5VQIVYKPVDLSK 492.6227 1,474.85 3 1216430 5VQIVYKPVDLSK 738.4289 1,474.84 2 815127 5VQIVYKPVDLSK 738.4289 1,474.85 2 979506 5VQIVYKPVDLSK 492.6235 1,474.85 3 1558740 1VYKPVDLSK 387.9027 1,160.69 3 840122 1VYKPVDLSK 393.7404 785.4662 2 555221 10FKDR 397.2157 792.4164 2 1013110 10FKDR 393.7415 785.4685 2 591744 10FKDR 397.2157 792.4168 2 836590 10FKDR 397.2157	GGSVQIVYKPVDLSK	530.6381	1,588.89	3	1860150					
SEKLDFK STATE SEKLDFK STATE SEKLDFK	GGSVQIVYKPVDLSK	530.6366	1,588.89	3						
SYQIVYKPVDLSK 492.6227 1,474.85 3 1216430 SVQIVYKPVDLSK 738.4289 1,474.84 2 815127 SVQIVYKPVDLSK 738.4314 1,474.85 2 979506 SVQIVYKPVDLSK 492.6235 1,474.85 3 1558740 LDFKDR 397.2141 792.4137 2 1977410 LDFKDR 397.2155 792.4164 2 1013110 LDFKDR 397.2155 792.4164 2 1013110 LDFKDR 397.2155 792.4204 2 1887930 LDFKDR 397.2157 397.4204 2 188	GGSVQIVYKPVDLSK	511.6294	1,531.87	3			 			
SVQIVYKPVDLSK 738.4289 1,474.84 2 815127 SVQIVYKPVDLSK 738.4381 1,474.85 2 979506 SVQIVYKPVDLSK 492.6235 1,474.85 3 1558740 IVYKPVDLSK 387.9027 1,160.69 3 840122 IVYKPVDLSK 393.7404 785.4662 2 555211 IVFKDLSK 393.7412 785.4663 2 568540 IVFVDLSK 393.7413 785.4668 2 430025 IVFVDLSK 393.7404 785.4663 2 579873 IVFVDLSK 393.7404 785.4663 2 579873 IVFVDLSK 393.7404 785.4668 2 466148 IVFVDLSK 393.7407 785.4668 2 466148 IVFVDLSK 393.7407 785.4668 2 466148 IVFVDLSK 393.7407 785.4668 2 466148 IVFVDLSK 393.7424 785.4609 2 339201 IVFVDLSK 393.7424 785.4609 2 339201 IVFVDLSK 393.7424 785.4609 2 339201 IVFVDLSK 393.7424 785.4702 2 816433 IVFTHK 378.2263 754.4381 2 125368 IVFTHK 378.2263 754.4381 2 125368 IVFTHK IV							+			
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KPVDLSK 393.7424 785.4702 2 816433 KIETHK 378.2263 754.4381 2 125368	KPVDLSK	393.7407	785.4668	2	466148	IGSLDNITHVPGGGNKK	569.6498	1,705.93	3	420993
	KPVDLSK	393.7422	785.4699	2	339201	KIETHK	378.2239	754.4333	2	130320
CGSLGNIHHK 374.8554 1,121.54 3 738854 KIETHK 378.2264 754.4382 2 693732		+			+					
	CGSLGNIHHK	374.8554	1,121.54	3	738854	KIETHK	378.2264	754.4382	2	693732

Supplementary Fig. 2 | Details of the peptides detected (shown in Fig. 2c, black) by enzymatic digestion of the trypsin protected core (Fig. 2b) of heparin-induced 2N4R tau fibrils.

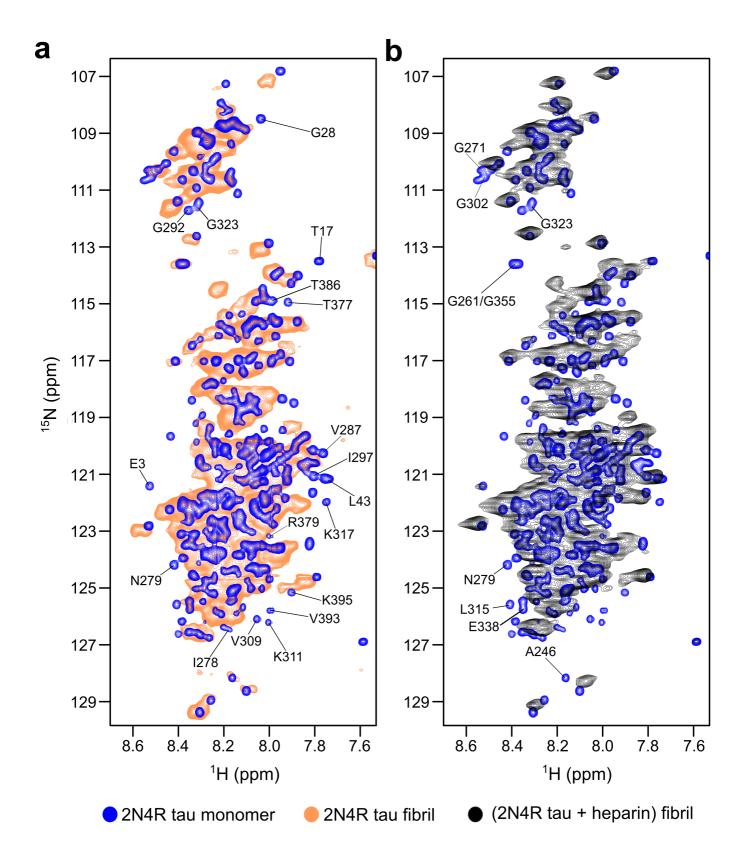
APTIMISER/OWNER March Ma	Sequence	Observed m/z	Absolute mass (Da)	Charge	TIC	Sequence	Observed m/z	Absolute mass (Da)	Charge	TIC
ARTHRIGATIVE	AKTDHGAEIVYK	666.352	1,330.69	2	2112160	HVPGGGSVQIVYKPVDLSK	660.7082	1,979.10	3	2811180
APTOSIGNAPHY	AKTDHGAEIVYK	666.3525	1,330.69	2	1441290	HVPGGGSVQIVYKPVDLSK	660.7073	1,979.10	3	1991730
COSAGEMENT CONTROLL 1972-09 3 2911-00 1 279-09 3 2911-00 1 279-09 3 2911-00 1 279-09 3 2911-00 1 279-09 3 2911-00 1 279-09 3 2911-00 1 279-09 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3 2911-00 3	AKTDHGAEIVYK	444.5705	1,330.69	3	2.02E+07	HVPGGGSVQIVYKPVDLSK	660.7075	1,979.10	3	2627530
GOSDAMINISTICATION GOSTAN T. 1972-99 3 2941440 T. 1972-99 T. 1972-9	AKTDHGAEIVYK	444.57	1,330.69	3	5533990	HVPGGGSVQIVYKPVDLSK	660.7018	1,979.08	3	4.21E+09
GESCHMINMPROGEOVERY 6842-87						HVPGGGSVQIVYKPVDLSK				2581060
DRININGGGSSYQINYPROPLICK 613-1341	CGSLGNIHHKPGGGQVEVK	658.6707		3	2941340	HVPGGGSVQIVYKPVDLSK		1,979.09	4	532325
INTROCOSYDIVIPPOLISK 613.3411 2.449.34 4 702160 4 53770 1 1979.09 4 53770 1 1979.00 4 53770 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750 1 1979.00 4 63750	· · · · · · · · · · · · · · · · · · ·					-				2597390
DIRESPROGOSYUPYPRYPLICK 613.1381 2.44831 3 1153600 1100000000000000000000000000000000										636190
WHORGESTYQPINEPOLISK										532791
INDICESSISTATIFFROCORM										714262
Devices (SUNTHYPOGGEN)N, 499,2466 2,791.20 5 262899 HPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIPPOGGEN/CHIP										482556
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IMPRGGSVIDWYRPUDISK 660,7059 1,979.10 3 5284810								 		
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Improcessyunymynusk	· · · · · · · · · · · · · · · · · · ·									
INPOGGSVIOVYKYULSK 495.7783 1,979.09 4 949283 EFINALTRENAM 592.622 1,585.86 3 1157.87										
INPEGGSVQVYKYVDLSK 660,7016 1,979.10 3 1,224980 ETHILTERENARAK 596,0012 1,778.49 3 1,767.41 1,778.41 1,979.08 3 1,066.71 1,979.08 3 1,066.71 1,979.10 3 1,02850 1,979.10 3 1,02850 1,979.09 4 1,579.09 3 1,02850 1,979.09 4 1,579.09 3 1,279.09 1,979.09 4 1,579.09 3 1,279.09 1,979.09 4 1,979.09 3 1,279.09 1,979.09 4 1,979.09 3 1,279.09 1,979.09 4 1,979.09 3 1,279.09 1,979.09 3 1,279.09 1,979.09 3 1,279.09 1,979.09 3 1,279.09 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09 3 1,979.09										
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HYPEGGSYQUYKPUDLSK 495.7789										3.73E+08 3.21E+07
INPOGGSVIQUYEPUDISK 660.7066 1.979.10 3 290.9350										9.96E+08
INPEGGSVQUYKPVDLSK	· · · · · · · · · · · · · · · · · · ·									810409
INPEGGSVQVYPVPDLSK				3						1651830
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INFRGGSVQIVKPVILSK 660.7025	HVPGGGSVQIVYKPVDLSK	660.7067	1,979.10	3	1646850	IGSLDNITHVPGGGNK	789.9175	1,577.82	2	5733840
INFOGGSVQIVYKPVDLSK 660,7028	HVPGGGSVQIVYKPVDLSK	495.7806	1,979.09	4	1388860	IGSLDNITHVPGGGNK	526.9476	1,577.82	3	1.48E+07
INFOGGSVQIVYKPVDLSK 495,7783	HVPGGGSVQIVYKPVDLSK	660.7051	1,979.09	3	4058520	IGSLDNITHVPGGGNK	526.9492	1,577.83	3	1.53E+08
INPEGGSVQIVYKPVDLSK	HVPGGGSVQIVYKPVDLSK	660.7028	1,979.09	3	5430780	IGSLDNITHVPGGGNK	526.9499	1,577.83	3	2.83E+09
INPEGGSSVQIVYKPVDLSK 660,702	HVPGGGSVQIVYKPVDLSK	495.7783	1,979.08	4	1.01E+09	IGSLDNITHVPGGGNK	526.9506	1,577.83	3	1707060
	HVPGGGSVQIVYKPVDLSK		1,979.09	4	847724	IGSLDNITHVPGGGNK		1,577.83	3	1876050
INFOGGSVQIVYKPVDLSK										1906910
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HVPGGGSVQIVYKPVDLSK								'		889692
HVPGGGSVQIVYKPVDLSK								 		3380620
HVPGGGSVQIVYKPVDLSK	·									1899070
HVPGGGSVQIVYKPVDLSK								,		2689600
HVPGGGSVQIVYKPVDLSK	-									2997430
HVPGGGSVQIVYKPVDLSK 495.7782 1,979.09 3 4776200 1,979.09 3 4776200 1,979.08 4 2.81E+07 1,979.09 4 1361110 1,979.09 4 1361110 1,979.09 4 1,577.82 3 352623 1,979.08 4 2,81E+07 1,979.09 4 1361110 1,979.10 3 2,744780 1,979.09 3 2,744780 1,979.09 3 2,40940 1,979.09 3 2,40940 1,979.09 3 2,40940 1,979.09 3 2,40940 1,979.09 3 1,32E+07 1,979.09 3 1,32E+07 1,979.09 3 1,32E+07 1,979.09 4 1,22E+07 1,979.09 4 1,979.09 4 1,22E+07 1,979.09 4 1,979.09 4 1,22E+07 1,979.09 4 1,22E+07 1,979.09 4 1,979.09 4 1,22E+07 1,979.09 4 1,979.09 4 1,979.09 4 1,22E+07 1,979.09 3 4333350 1,977.82 3 46507 1,577.82 3 46507 1,577.82 3 46507 1,577.82 3 46507 1,577.82 3 46507 1,577.82 3 46507 1,577.82 3 46507 1,577.82 3 46507 1,577.82 3 46507 1,577.82 3 46507 1,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577				3	2884480					4.87E+07
HVPGGGSVQIVYKPVDLSK			1,979.09	3						3526230
HVPGGGSVQIVYKPVDLSK 660.706 1,979.10 3 2744780 IGSLDNITHVPGGGNK 526.9481 1,577.82 3 538312 1,979.09 3 9240940 IGSLDNITHVPGGGNK 526.9467 1,577.82 3 484115 1,577.82 3 484115 1,577.82 3 484115 1,577.82 3 484115 1,577.82 3 484115 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 1,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.8	HVPGGGSVQIVYKPVDLSK	495.7782	1,979.08	4	2.81E+07	IGSLDNITHVPGGGNK	526.9468	1,577.82	3	6623530
HVPGGGSVQIVYKPVDLSK 495.7798 1,979.09 3 9240940 HVPGGGSVQIVYKPVDLSK 495.7798 1,979.09 4 793429 HVPGGGSVQIVYKPVDLSK 495.7794 1,979.09 3 1.32E+07 HVPGGGSVQIVYKPVDLSK 495.7797 1,979.09 4 1,22E+07 HVPGGGSVQIVYKPVDLSK 495.7797 1,979.09 4 1,979.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 4 1,079.09 1,079.09 4 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,079.09 1,0	HVPGGGSVQIVYKPVDLSK	495.781	1,979.09	4	1361110	IGSLDNITHVPGGGNK	526.948	1,577.82	3	2208650
HVPGGGSVQIVYKPVDLSK 495.7788 1,979.09 4 793429 IGSLDNITHVPGGGNK 526.9462 1,577.82 3 2.41E+ HVPGGGSVQIVYKPVDLSK 660.7033 1,979.09 3 1.32E+07 IGSLDNITHVPGGGNK 526.948 1,577.82 3 1.15E+ HVPGGGSVQIVYKPVDLSK 495.7794 1,979.09 4 1.22E+07 IGSLDNITHVPGGGNK 526.9489 1,577.82 3 1.03E+ IGSLDNITHVPGGGNK 526.9489 1,577.82 3 1.03E+ IGSLDNITHVPGGGNK 526.9489 1,577.82 3 1.03E+ IGSLDNITHVPGGGNK 526.9487 1,577.83 3 17135: IGSLDNITHVPGGGNK 526.9487 1,577.82 3 465070; 1,979.09 2 406341 IGSLDNITHVPGGGNK 526.9487 1,577.82 3 165670; 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,979.09 4 1,	HVPGGGSVQIVYKPVDLSK	660.706	1,979.10	3	2744780	IGSLDNITHVPGGGNK	526.9481	1,577.82	3	5383120
HVPGGGSVQIVYKPVDLSK 660.7033 1,979.09 3 1.32E+07 IGSLDNITHVPGGGNK 526.948 1,577.82 3 1.15E+ HVPGGGSVQIVYKPVDLSK 495.7794 1,979.09 4 1.22E+07 IGSLDNITHVPGGGNK 526.9489 1,577.82 3 1.03E+ HVPGGGSVQIVYKPVDLSK 495.7797 1,979.09 4 1596920 IGSLDNITHVPGGGNK 526.9501 1,577.83 3 17135: IGSLDNITHVPGGGNK 526.9487 1,577.82 3 465070; 1,979.09 2 406341 IGSLDNITHVPGGGNK 526.9487 1,577.82 3 465070; 1,979.09 4 1,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 3 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.82 4,577.	HVPGGGSVQIVYKPVDLSK	660.7045	1,979.09	3	9240940	IGSLDNITHVPGGGNK	526.9467	1,577.82	3	4841190
HVPGGGSVQIVYKPVDLSK 495.7794 1,979.09 4 1.22E+07 IGSLDNITHVPGGGNK 526.9489 1,577.82 3 1.03E+ HVPGGGSVQIVYKPVDLSK 495.7797 1,979.09 4 1596920 IGSLDNITHVPGGGNK 526.9501 1,577.83 3 17135: IGSLDNITHVPGGGNK 526.9487 1,577.82 3 465070 1,979.09 2 406341 IGSLDNITHVPGGGNK 526.9487 1,577.82 3 465070 1,979.09 2 406341 IGSLDNITHVPGGGNK 526.9487 1,577.82 3 165670 1,979.09 1,979.09 2 406341 IGSLDNITHVPGGGNK 526.9487 1,577.82 2 212540 1,979.09 1,979.09 2 406341 IGSLDNITHVPGGGNK 526.9487 1,577.82 3 1,03E+ 1,					793429		526.9462			2.41E+07
HVPGGGSVQIVYKPVDLSK 495.7797 1,979.09 4 1596920 IGSLDNITHVPGGGNK 526.9501 1,577.83 3 1713555 1,979.09 3 4333350 IGSLDNITHVPGGGNK 526.9457 1,577.82 3 465070 1,979.09 2 406341 1,577.82 3 1,577.82 3 1,577.82 1,577.82 3 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.82 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1,577.83 1	HVPGGGSVQIVYKPVDLSK	660.7033		3			526.948			1.15E+08
HVPGGGSVQIVYKPVDLSK 660.7037 1,979.09 3 4333350 IGSLDNITHVPGGGNK 526.9457 1,577.82 3 465070 HVPGGGSVQIVYKPVDLSK 990.5502 1,979.09 2 406341 IGSLDNITHVPGGGNK 526.9487 1,577.82 3 16567: HVPGGGSVQIVYKPVDLSK 660.7068 1,979.10 3 4017330 IGSLDNITHVPGGGNK 789.9152 1,577.82 2 21254: HVPGGGSVQIVYKPVDLSK 495.779 1,979.09 4 8845590 IGSLDNITHVPGGGNK 526.9503 1,577.83 3 157708				4						1.03E+07
HVPGGGSVQIVYKPVDLSK 990.5502 1,979.09 2 406341 IGSLDNITHVPGGGNK 526.9487 1,577.82 3 16567.3 HVPGGGSVQIVYKPVDLSK 660.7068 1,979.10 3 4017330 IGSLDNITHVPGGGNK 789.9152 1,577.82 2 21254.3 HVPGGGSVQIVYKPVDLSK 495.779 1,979.09 4 8845590 IGSLDNITHVPGGGNK 526.9503 1,577.83 3 157708										1713510
HVPGGGSVQ/VYKPVDLSK 660.7068 1,979.10 3 4017330 IGSLDNITHVPGGGNK 789.9152 1,577.82 2 21254 HVPGGGSVQ/VYKPVDLSK 495.779 1,979.09 4 8845590 IGSLDNITHVPGGGNK 526.9503 1,577.83 3 157708										4650700
HVPGGGSVQIVYKPVDLSK 495.779 1,979.09 4 8845590 IGSLDNITHVPGGGNK 526.9503 1,577.83 3 157708								· · · · · · · · · · · · · · · · · · ·		1656710
										2125410
<u>HVPGGGSVQIVYKPVDLSK</u> 495.7822 1,979.10 4 594417 <u>IGSLDNITHVPGGGNK</u> 526.9464 1,577.82 3 94561:										1577080
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SIGNETHMENGENER SEASON 1,577.28 3 155100 1500.0000000000000000000000000000000000	Sequence	Observed m/z	Absolute mass (Da)	Charge	TIC	Sequence	Observed m/z	Absolute mass (Da)	Charge	TIC
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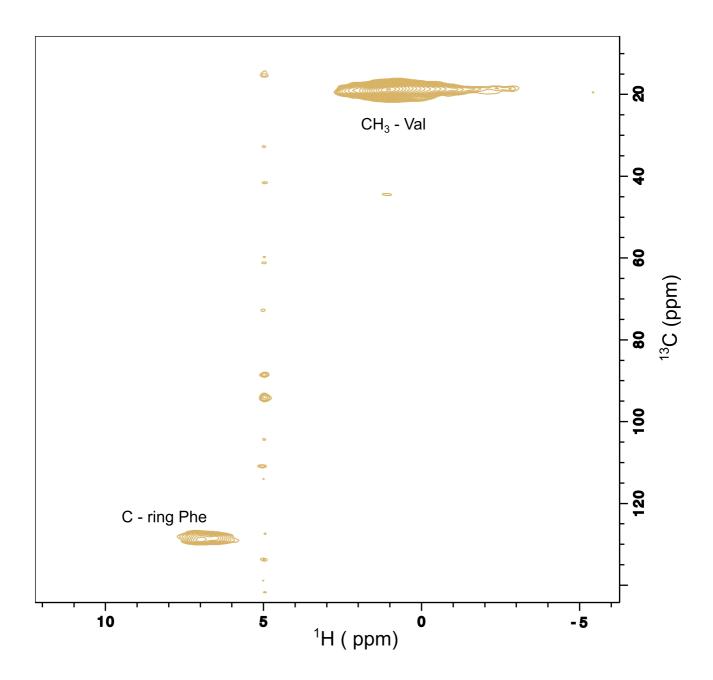
Supplementary Fig. 3 | Details of the peptides detected (shown in Fig. 2c, orange) by enzymatic digestion of the trypsin protected core (Fig. 2b) of heparin-free 2N4R tau fibrils.



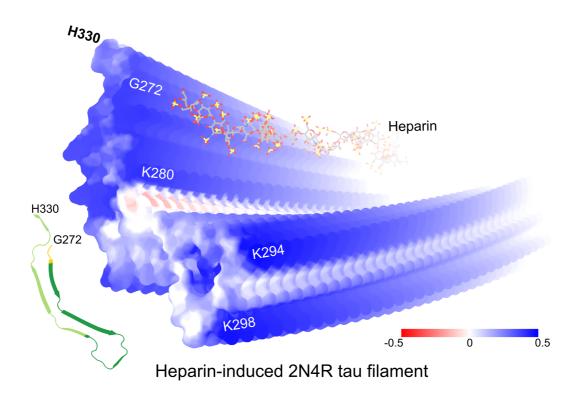
Supplementary Fig. 4 | Pronase-resistant core of heparin-free 2N4R tau fibrils. a, SDS-PAGE gel of pronase-digested tau fibrils formed in the absence of heparin. The pronase band is indicated in a separate lane. The result was reproducible for three independently performed experiments. b, Number of peptides detected from the enzymatic digestion of the tau band observed in SDS-PAGE in (a). The position of lysine and arginine residues in 2N4R tau are marked with purple and green dots, respectively. c, Details of the peptides detected as shown in (b).



Supplementary Fig. 5 | Superposition of the ¹H-¹⁵N HSQC spectrum of monomeric 2N4R tau (blue) with ¹H-¹⁵N INEPT spectra of heparin-free 2N4R fibrils (orange; left) and heparin-induced fibrils of 2N4R tau (black; right).



Supplementary Fig. 6 | 2D hCH spectra of heparin-free fibrils of $^{13}C_{\gamma}$ valine, ^{13}C -ring phenylalanine-labeled 2N4R tau.



Supplementary Fig. 7 | Electrostatic surface potential of the heparin-induced 2N4R tau fibrils (snake form; PDB code: 6QJH). Positively and negatively charged residues are shown in blue and red, respectively. A molecule of heparin is displayed to illustrate the presence of heparin on the surface of the fibril.