Supplementary Materials

Communication

1-(Propane-2-ilidenehydrazono)-4-(*p*-tolyl)-2,3-diazaspiro[5.5]undec-3-ene

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Abstract: Earlier we published a new series of spiro[cycloalkane]pyridazinones with high Fsp^3 character. Our target was to synthesize further derivatives with nitrogen containing heterocycles, e.g., triazolo or tetrazolo rings. The corresponding thioxo derivatives (**1a,b**) were prepared too, which seemed to be good starting materials for the synthesis of tetrazolo derivatives. The reaction of the pyridazinethiones (**1a,b**) with hydrazine resulted surprisingly in the Schiff bases with acetone (**3a,b**) of the desired hydrazones (**2a,b**).

Keywords: pyridazinethione, spiro[cycloalkane]pyridazine, hydrazine, acetone, Schiff base

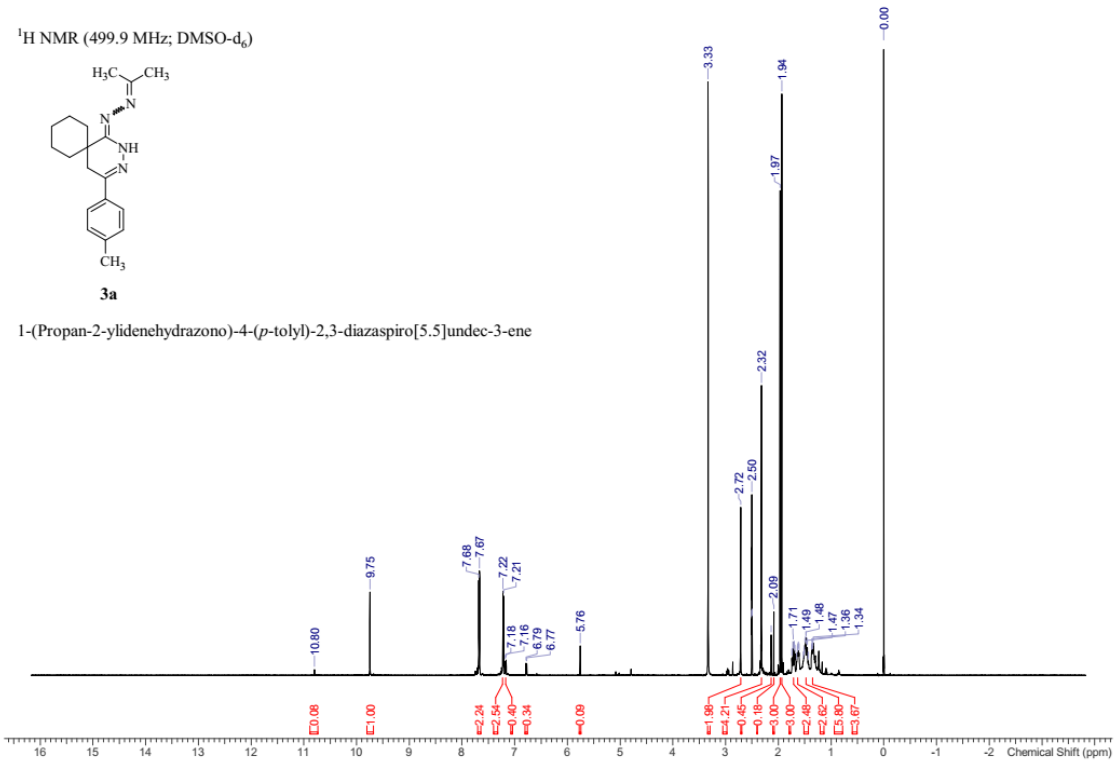


Figure S1 The ^{1}H NMR spectrum of 1-(propan-2-ylidenehydrazono)-4-(*p*-tolyl)-2,3-diazaspiro[5.5]undec-3-ene (**3a**) The ^{1}H NMR spectrum was recorded in DMSO-d6 solution with chemical shifts relative to tetramethylsilane.

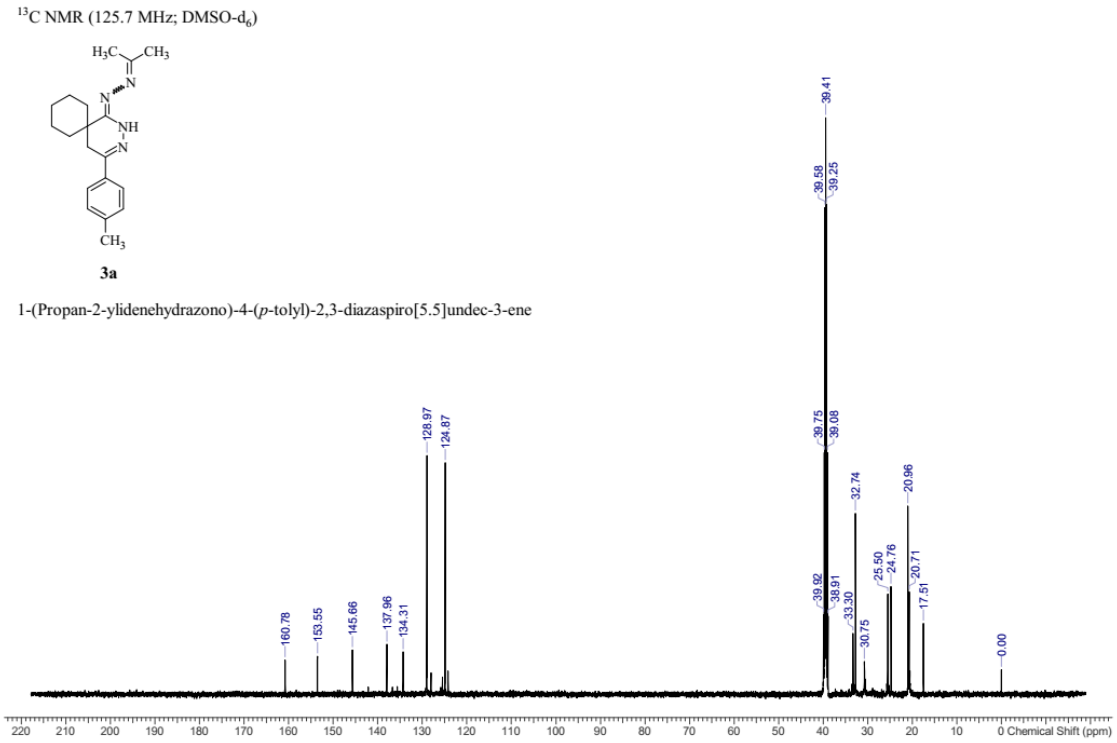
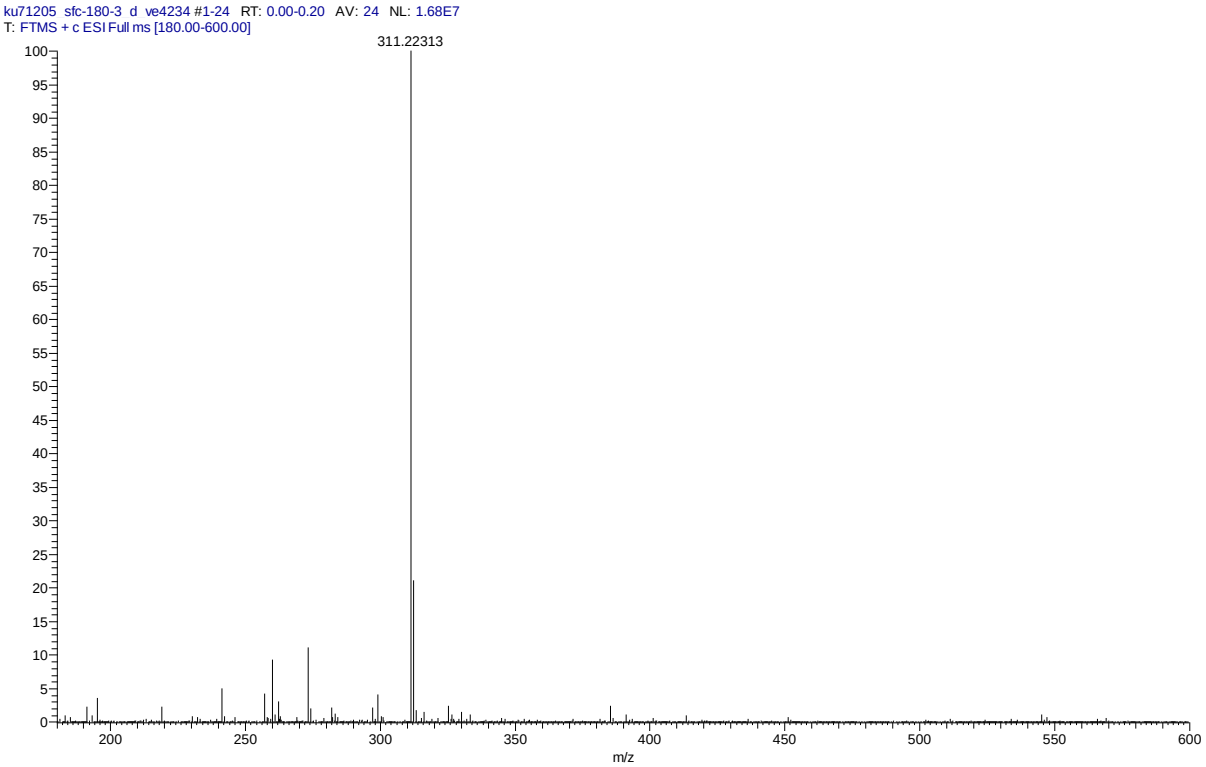


Figure S2 The ^{13}C NMR spectrum of 1-(propan-2-ylidenehydrazono)-4-(*p*-tolyl)-2,3-diazaspiro[5.5]undec-3-ene (**3a**) The ^{13}C NMR spectrum was recorded in DMSO-d6 solution with chemical shifts relative to tetramethylsilane.



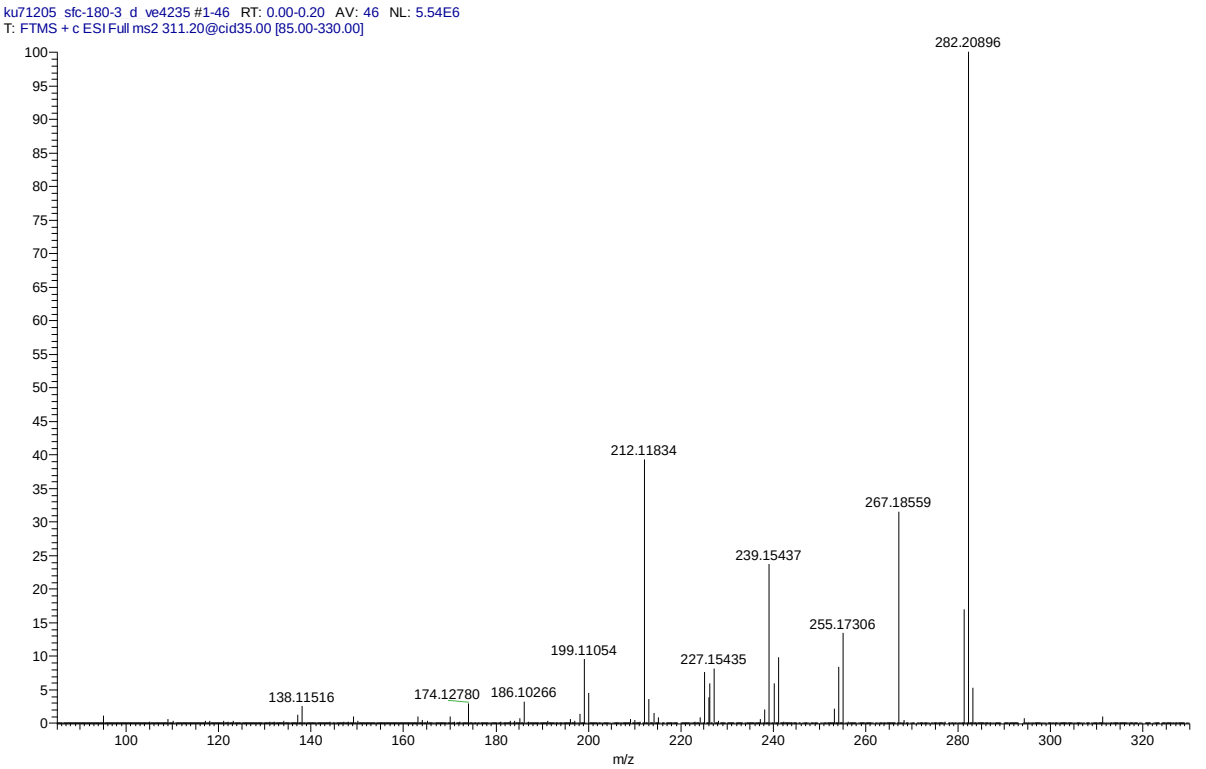


Figure S3 The HR-MS and HR-MS-MS spectrum of 1-(propan-2-ylidenehydrazono)-4-(*p*-tolyl)-2,3-diazaspiro[5.5]undec-3-ene (**3a**)

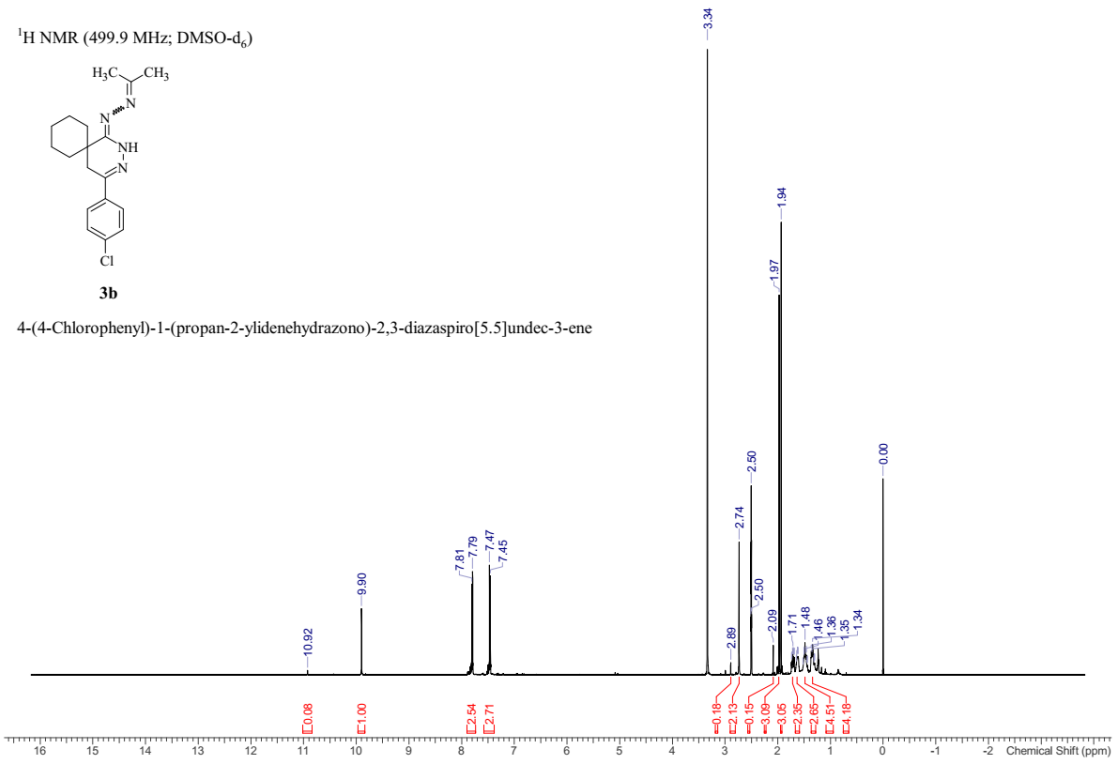


Figure S4 The ^{1}H NMR spectrum of 4-(4-chlorophenyl)-1-(propan-2-ylidenehydrazono)-2,3-diazaspiro[5.5]undec-3-ene (**3b**) The ^{1}H NMR spectrum was recorded in DMSO-d6 solution with chemical shifts relative to tetramethylsilane.

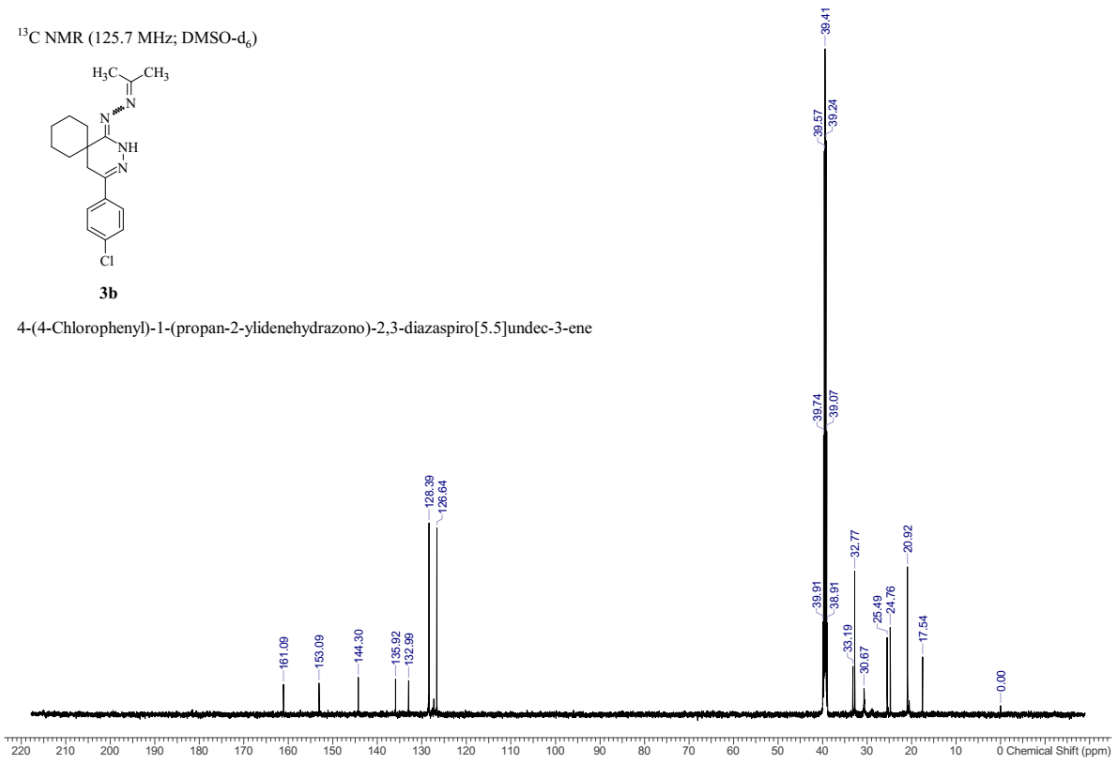
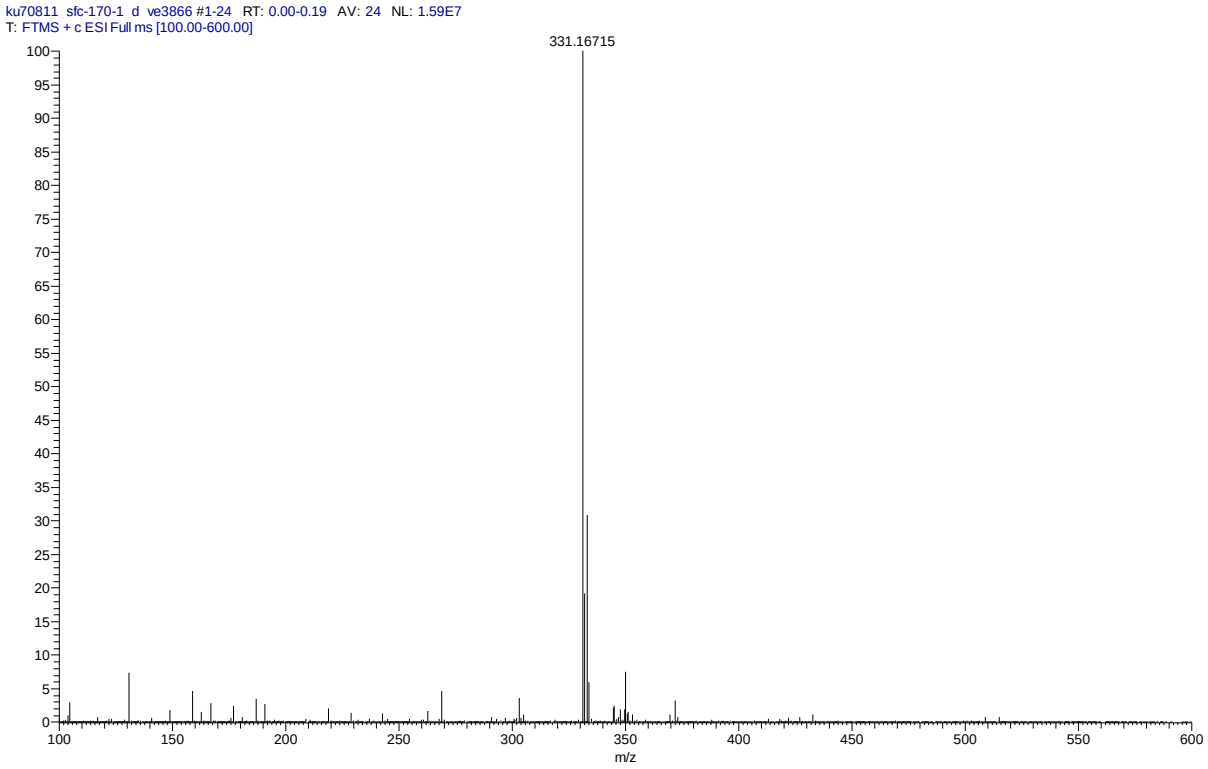


Figure S5 The ^{13}C NMR spectrum of 4-(4-chlorophenyl)-1-(propan-2-ylidenehydrazono)-2,3-diazaspiro[5.5]undec-3-ene (**3b**) The ^{13}C NMR spectrum was recorded in DMSO-d6 solution with chemical shifts relative to tetramethylsilane.



HR-MS-MS spectrum (SFC-170-1)

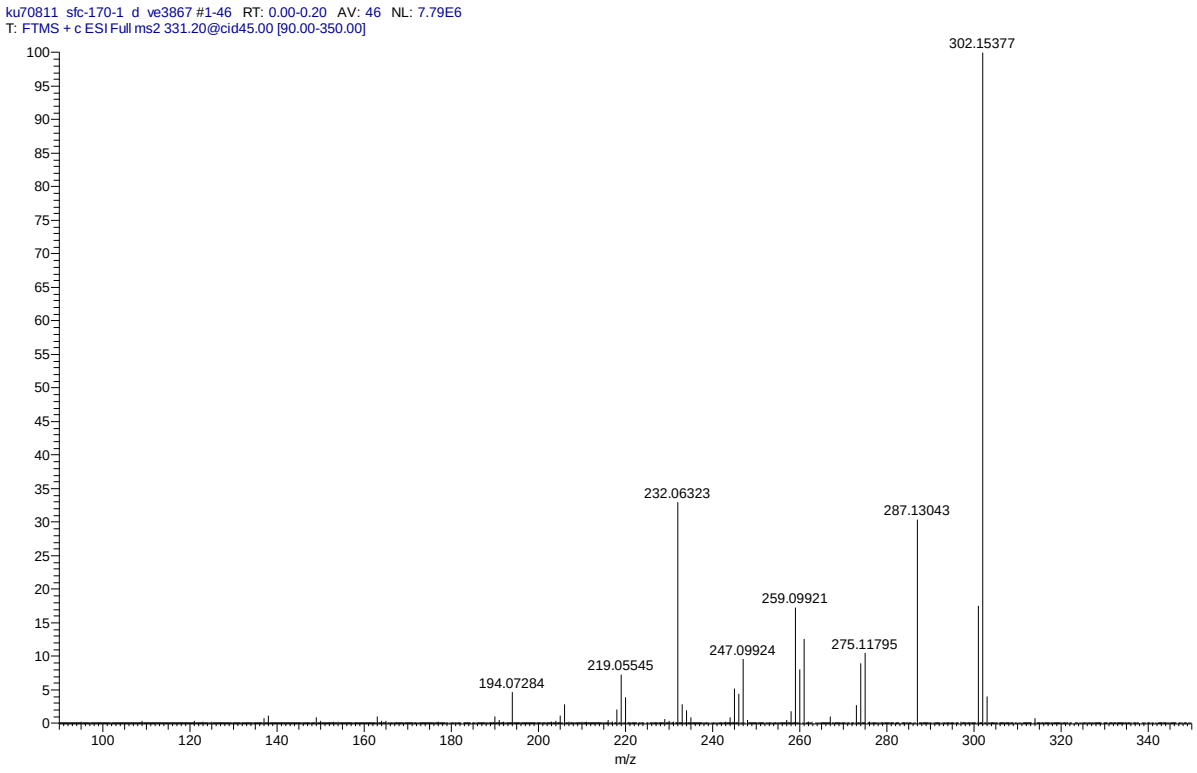


Figure S6 The HR-MS and HR-MS-MS spectrum of 4-(4-chlorophenyl)-1-(propan-2-ylidenehydrazono)-2,3-diazaspiro[5.5]undec-3-ene (**3b**)