Human, mouse and rat HNF4α2 amino acid sequence alignment

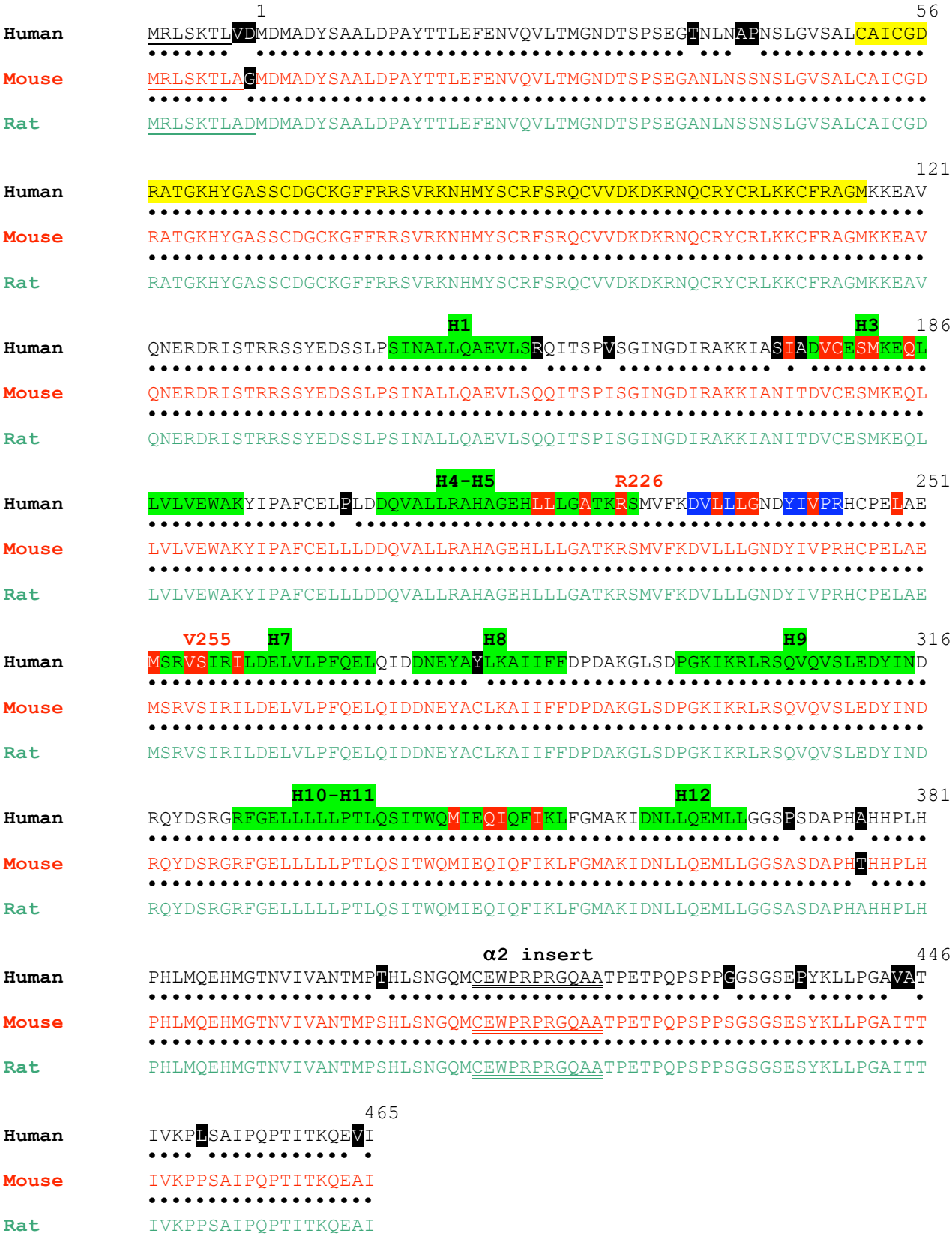

Figure S5. Alignment of human, mouse and rat HNF4α2 amino acid sequence.
In this study, we determined the ligand bound to three different species of HNF4α – human (Fig. S3), mouse (Fig. 3) and rat (Fig.s 1,2). The ligand binding domain (LBD) of rat and mouse HNF4α is 100% identical on the amino acid level. The LBD of rat/mouse HNF4α is 97.5% identical to human; there are only 6 amino acids that are different, none of which contact the ligand [1,2]. The DNA binding domain (DBD) of human, mouse and rat HNF4α are 100% identical. Indicated is the conventional amino acid numbering for HNF4α2, which does not include an N-terminal extension resulting from an alternative translation start site (underline) [3]. HNF4α1 (used in Fig.s 5,6) is identical to HNF4α2 except for the α2 insert (double underline). Highlight: black, species differences; red, ligand contacts; yellow, DBD; green, LBD helices; blue, LBD β-sheets. Residues mutated in this study (V255, R226) are noted. Human HNF4α2 (NM_000457.3); mouse HNF4α2 (NM_008261); rat HNF4α2 (NM_022180).

1. Dhe-Paganon S, Duda K, Iwamoto M, Chi YI, Shoelson SE (2002) Crystal structure of the HNF4 alpha ligand binding domain in complex with endogenous fatty acid ligand. J Biol Chem 277: 37973-37976.
2. Wisely GB, Miller AB, Davis RG, Thornquest AD, Jr., Johnson R, et al. (2002) Hepatocyte nuclear factor 4 is a transcription factor that constitutively binds fatty acids. Structure 10: 1225-1234.
3. Sladek FM, Zhong WM, Lai E, Darnell JE, Jr. (1990) Liver-enriched transcription factor HNF-4 is a novel member of the steroid hormone receptor superfamily. Genes Dev 4: 2353-2365.