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HIV-1 protease, enzyme, catalysis, mechanism, drug resistance, substrate, RT-RH, TFR-PR, tetrahedral intermediate, Michaelis complex, hydrogen bond, molecular replacement, LBHB, SIHB, V82A, M36I, ritonavir, crystal structure.

Abbreviations:

AIDS - Acquired Immuno-Deficiency Syndrome
HIV-1: Human Immunodeficiency Virus Type 1
SIV-1: Simian Immunodeficiency Virus Type 1
CD4: Cluster of Differentiation
CRF: Circulatory Recombinant Form
gag: Group Specific Antigen
pol: Polyprotein
RT: Reverse Transcriptase
RH: RNAse Hybrid
TFR: Trans FRame
p6\textsuperscript{pol}: 6 kDa protein flanking gag and pol region
PR: Protease
PDB: Protein Data Bank
RCSB: Research Collaboratory for Structural Bioinformatics
NMR: Nuclear Magnetic Resonance
TD: Tethered Dimer
TS: Transition State
NAC: Near Attack Conformation
TI: Tetrahedral Intermediate
LBHB: Low Barrier Hydrogen Bond
SIHB: Short Ionic Hydrogen Bond
SA: Simulated Annealing
ML: Maximum Likelihood
LLG: Log Likelihood Gain
EWG: Electron withdrawing group