

Name: _____ Student ID: _____
CHEM 161 PAL Fall 2026

Worksheet #15: Chymotrypsin

1. Draw the arrow pushing mechanism for the hydrolysis of the peptide AFI by chymotrypsin. For each step in the mechanism determine if it is part of acetylation or deacetylation phase and what type of catalytic strategy is being used by the enzyme (covalent, acid/base, or metal ion).

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2. For each of the peptides below determine the products formed after cleavage with chymotrypsin.

a. GHWTRF

b. HWSTPYY

c. VCDWSE

d. NMTIYL

e. FMWHYLL

3. Why is the hydrogen bonding network in the catalytic triad important?