CSUSM
STEM Success Center

Carboxylic Acids Derivatives

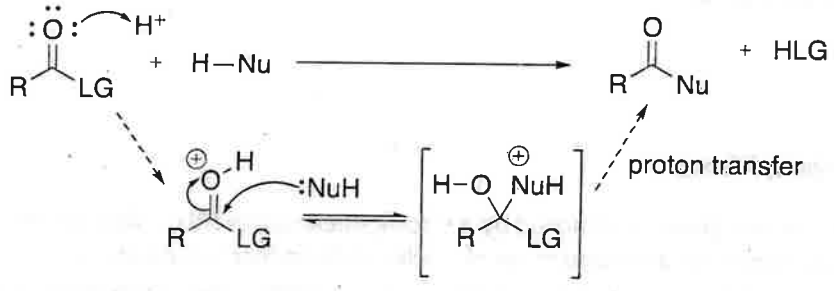
Reactions of Carboxylic Acids and Derivatives

Nucleophilic Attack

- An attack from a nucleophile on Carboxylic Acids and Derivatives (Acyl Halide, Acid Anhydride, Ester, Amide) occurs in the same way as in the attack of Nucleophile on Ketones and Aldehydes.
- The presence of an electron withdrawing atom on the carbonyl allows for the formation of a new carbonyl derivative and expulsion of the leaving group (LG).
- All derivative reactions follow the same pattern; carbonyl group being attacked by a nucleophile (weak).

General Mechanism

Under Acidic Conditions



Under Basic Conditions

