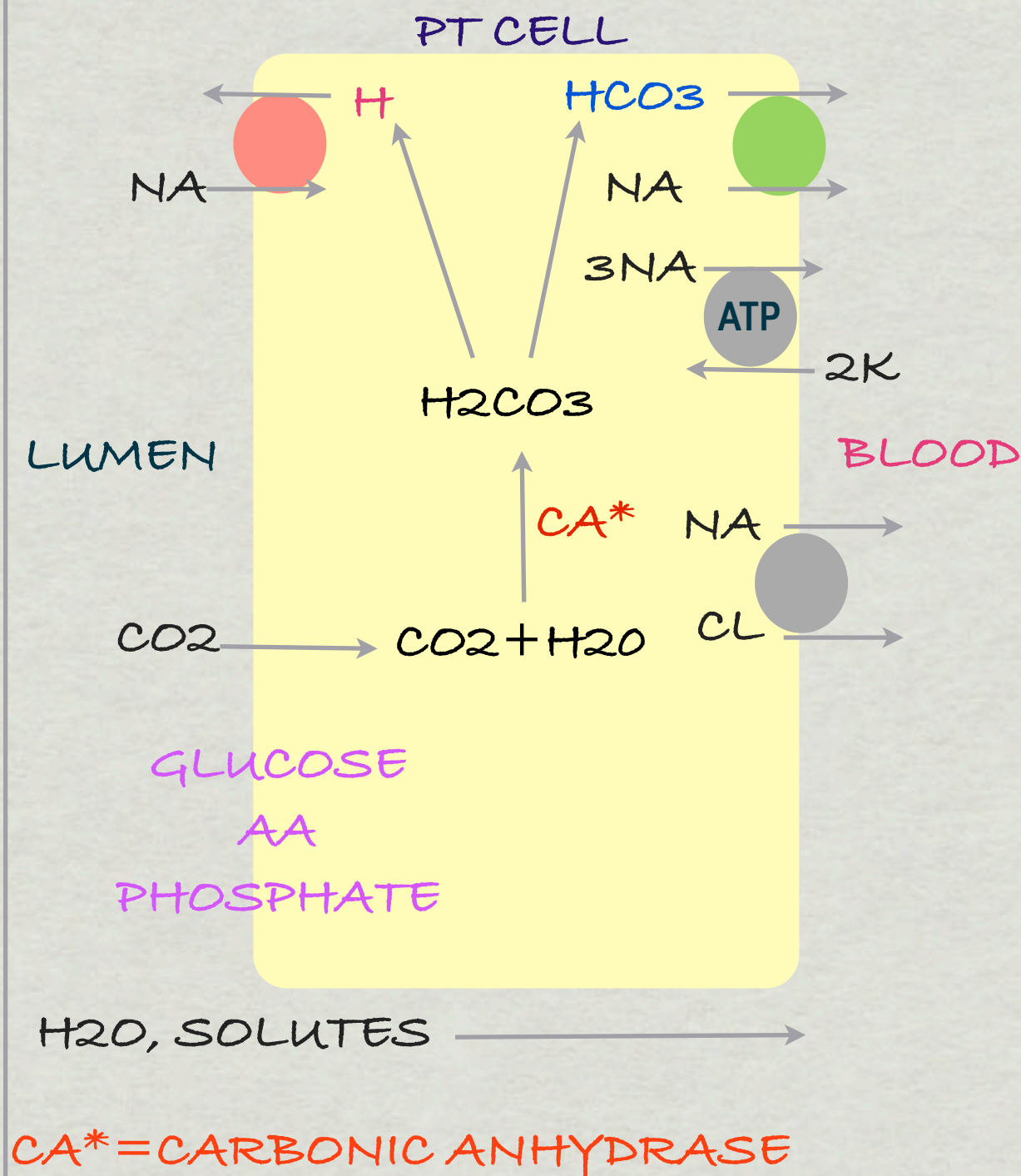


PT physiology



Na reabsorption	~ 60% in PT
1. ATP dependant Na/K pump PRIMARY ACTIVE TRANSPORT	ubiquitous pump moves ions across the membrane against the concentration gradient 3Na out of the cell and 2 K into the cell
2. Na/H and Na/HCO ₃ pumps SECONDARY ACTIVE TRANSPORT	uses the energy produced by Na/ K ATP pump to move ions across the membrane : Na in/ H out (antiport) and Na out/ HCO ₃ out (symport)
3. glucose, AA, PO ₄ with Na SECONDARY ACTIVE TRANSPORT	same as 2, just gluc, AA and PO ₄ are totally absorbed
CO ₂ & H ₂ O reabsorption	
CO ₂	reaction w/ H ₂ O facilitated by CA → H ₂ CO ₃ → H (antiport) + HCO ₃ reabsorbed 90%(symport)
H ₂ O & solutes	reabsorbed by paracellular diffusion through tight junctions less tight in PT