





## Mouse Buttons

Clicking on an atom identifies that atom in the Command window. Moving the mouse while holding mouse buttons and/or control keys manipulates the molecule. The default bindings are described below.

 Mac	 Windows	RasMol Action
Command	Right	Move Molecules
Shift	Shift+Left	Zoom
Shift-Cmnd	Shift+Right	Rotate Z

## Color Commands

`color [object] <color>` - Color representation  
 Ex: `color helix yellow`

or: `select helix` followed by  
`color yellow`

### Example Colors:

Blue	Cyan	Green
GreenBlue	Magenta	Red
Orange	Purple	RedOrange
Violet	White	Yellow



CPK (oxygen = red, nitrogen = blue, carbon = gray)

Can also use RGB color codes - Ex: `color [200,200,200]`

## Selecting and Restricting

`select <expression>` - Select a part of molecule  
 Ex: `select backbone`

`restrict <expression>` - Display only part of molecule  
 Ex: `restrict atomno = 15`

### Predefined sets you can select/restrict:

<code>backbone</code>	<code>sidechain</code>
<code>hydrophobic</code>	<code>nucleic</code>
<code>helix</code>	<code>sheet</code>
<code>charged</code>	<code>water</code>
<code>hetero</code>	

`atomno = <number>` (the atom with that number)  
`*<letter>` (the chain with that letter)  
`<number>` (the amino acid with that number)  
`<number> - <number>`  
 (all amino acids between those numbers)  
`atomno >= <number> and atomno <= <number>`  
 (all atoms between those numbers)

## Display Commands

`wireframe <value>` - Display stick bonds  
 Ex: `wireframe 225`

`spacefill` - Display spacefill  
`spacefill <value>` - Specify atom sphere radius  
 Ex: `spacefill 275`

`backbone <value>` - Specify backbone radius  
 Ex: `backbone 300`

`cartoon <value>` - Display backbone cartoons  
 Ex: `cartoon 200`

`ribbon <value>` - Display backbone ribbons  
 Ex: `ribbon 150`

## Manipulation Commands

`center <expression>` - Set center of rotation  
 Ex: `center *a`

## Fancy Visual Effects

`Set ambient <number>` - Brightness of image  
 Ex: `set ambient 45`

`Set specular on` - Turns on specular

`Set specpower <number>` - Intensity of specular  
 Ex: `set specpower 20`

`Set shadows on` - Turns shadows on

`set shadows off` - Turns shadows off

## Clean Sidechains

`Select <amino acid number(s)> and (sidechain or alpha)`  
 Ex: `select lys7 and (sidechain or alpha)`  
`select lys7-trp24 and (sidechain or alpha)`

`Wireframe 225`  
`Spacefill 275`