

Parasympathetic

in parasympathetic → preganglionic is long and post ganglionic is short

para sympathetic

Preganglionic

ach

receptor is (nicotinic receptor)
in the post ganglionic

post ganglionic

short

receptor is (muscarinic receptor)

in the organ

preganglionic → ach → cholinergic nerve
(in sympathetic and para sympathetic)

post ganglionic → ach → cholinergic nerve
(in para)

post ganglionic → NE → Adrenergic nerve
(in sympathetic)

post ganglionic → NE → Adrenergic nerve
(in sympathetic
For kidney)

post ganglionic → Ach → cholinergic nerve
(in sympathetic
For sweet glands)

Sympathetic

Somatic nervous system → ach
receptor is (nicotinic receptor)

From spinal cord

sympathetic

preganglionic is short

post ganglionic is long

short

Preganglionic
ach
receptor is (nicotinic receptor)
in the post ganglionic

long

post ganglionic
NE
receptor is (alpha, beta receptor)
in the organ

Exceptions in sympathetic:

1 - sweat glands

Sympathetic

Preganglionic → short
ach
receptor is (nicotinic receptor)
in the post ganglionic
post ganglionic → long
ach
receptor is (muscarinic receptor)
in the sweat gland

2 - renal vascular smooth muscles

Sympathetic

Preganglionic → short
ach
receptor is (nicotinic receptor)
in the post ganglionic
post ganglionic → long
NE + Dopamine
receptor is (alpha, beta receptor)
in the renal

3 - adrenal medulla

Sympathetic

Preganglionic → short
ach
receptor is (nicotinic receptor)
in the post ganglionic
Epinephrine (mainly)
Nor Epinephrine (less)