As a result of peripheral nerve injuries (PNIs) there is partial or complete loss of sensory motor function which affect the quality of life. Currently we do not have any FDA approved drug for PNIs and possible treatments are surgical. Literature reported a lot of plants which have neuro-regenerative potential. This study was designed to estimate the neuro-regenerative potential of *Glycyrrhiza glabra*. For this study 32 Swiss albino mice were divided into four groups, three were treatment and one was vehicle control group. Aqueous, methanolic and ethanolic extracts of *G. glabra* were orally administered to treatment groups for 28 days (7 days before injury and 21 days after injury). Behavioral assessment tests (Sciatic functional index, toe spread and pinprick) were performed to estimate sensory motor functional recovery after crush injury. We observed the accelerated sensory motor functional recovery in treatment groups as compare to vehicle control group in second and third week of nerve crush injury. To second our results we also did cell culture of dorsal root ganglia neurons with aqueous extract of *G. glabra*. In cell culture our treatment groups (100µg/ml and 200µg/ml) showed accelerated development of neurite outgrowth than vehicle control group. It is concluded that *G. glabra* has neuro-regenerative potential for peripheral nerve regeneration and can be used as a complementary medicine to treat PNIs however, further investigation is required at molecular level.