

TJ proteins modifications	Targeted TJ proteins	Signaling pathway	Stimulus / Diseases	References
Serine/Threonine Phosphorylation	Cld5 (Thr207)	PKA	cAMP	[124]
	Cld5, Occludin and ZO-1	nPKC- θ / aPKC- ζ	Hypoxia	[131]
	N.D.	cPKC- α , cPKC- β III , aPKC- λ/ζ	HIV-1 gp120	[132]
	Cld5 (T207) Occludin (T382/S507)	RhoA/Rho kinase	HIV-1 encephalitis	[123]
	Cld5, Occludin, ZO-1	RhoA / PKC- α	CCL2 chemokine	[142]
	Cld5 and Occludin	MLCK	Alcohol / Reactive oxygen species	[152, 153]
	N.D.		Hypoxia / Reactive oxygen species	[151]
Tyrosine Phosphorylation	Occludin	c-Src	Cerebral ischemia	[161]
	Occludin	N.D.	Glutamate	[156]
	Cld5	N.D.	TGF- β	[157]
	ZO-1	N.D.	Tyrosine phosphatase inhibition	[155]
Down-regulation or degradation	Cld5 and Occludin Internalization	Caveolae-dependent endocytosis	CCL2 chemokine	[172]
	Occludin	JNK, p38MAPK	Amyloid- β peptide	[177]
	Cld5	ERK1/2	HIV-1 Tat protein	[171]
	Occludin and ZO-1 distribution	PLC- γ , PI3K/Akt	Hypoxia	[178]
		N.D.		[164]
	Cld5	N.D.		[163]
	Cld5 and Occludin	VEGFR	VEGF	[162]
	Cld3	N.D.	Multiple Sclerosis Glioblastoma multiforme	[41]
	Cld5, Occludin, ZO-1	nPKC- δ	Cerebral ischemia	[179]
	Occludin and ZO-1	MLCK	HTLV-1	[154]
Cld5 and Occludin	RhoA/RhoK	Reactive oxygen species	[180]	

N.D : Not Described

Table 1: Dysregulation of the BBB via phosphorylation or down-regulation of TJ proteins