ZAC (zinc-activated channel)

Overview: The zinc-activated channel [ZAC, nomenclature as agreed by the NC-IUPHAR Subcommittee for the zinc activated channel (Hales and Peters 2009)] is a member of the Cys-loop family that includes the nicotinic acetylcholine, 5-HT_3, $GABA_A$ and strychnine-sensitive glycine receptors (Davies *et al.*, 2003; Houtani *et al.*, 2005). The channel is likely to exist as a homopentamer of 4TM subunits that form an intrinsic cation-selective channel displaying constitutive activity that can be blocked by (+)-tubocurarine (Davies *et al.*, 2003). ZAC is present in the human, chimpanzee, dog, cow and opossum genomes, but is functionally absent from mouse, or rat, genomes (Davies *et al.*, 2003; Houtani *et al.*, 2005).

Nomenclature	ZAC
Ensembl ID	ENSG00000186919
Selective agonists (pEC_{50})	Zn^{2+} (3.3)
Selective antagonists (pIC_{50})	(+)-Tubocurarine (5.2)
Functional characteristics	Outwardly rectifying current (both constitutive and evoked by Zn^{2+})

References

Davies PA *et al.* (2003). *J Biol Chem* **278**: 712–717.
Hales TG, Peters JA (2009). http://www.iuphar-db.org/IC/FamilyIntroductionForward?familyId=6).
Houtani T *et al.* (2005). *Biochem Biophys Res Commun* **335**: 277–285.