



## Product Information Sheet

### Polyclonal Anti- Cullin 4B, **CUL4B** (Magnetic Bead Conjugate)

<b>Catalogue No.</b> PA1233-M	<b>Immunogen</b>
<b>Lot No.</b> 09F01	A synthetic peptide corresponding to a sequence of human Cullin 4B, identical to the related rat and mouse sequence.
<b>Ig type:</b> rabbit IgG1	<b>Purification</b> Immunogen affinity purified
<b>Size:</b> 100µg/Vial	<b>Contents</b> Each vial contains 1mg/ml Magnetic Bead in PBS, pH 7.2, 0.05mg NaN <sub>3</sub> .
<b>Specificity</b> Zebrafish, human, rat. No cross reactivity with other proteins.	<b>Storage</b> Store at 4 °C for frequent use.
<b>Recommended application</b> <i>Immunoprecipitation(IP)</i>	<b>Description:</b> This Antagene antibody is immobilized by the covalent reaction of hydrazinonicotinamide-modified antibody with formylbenzamide-modified magnetic beads. It is useful for immunoprecipitation

#### BACKGROUND

Cullin 4B/CUL4B encodes a scaffold protein that organizes a cullin-RING (really interesting new gene) ubiquitin ligase (E3) complex in ubiquitylation.<sup>1</sup> The CUL4 gene encodes a protein of 913 amino acids. The cullin domain is located between amino acid residues 217 and 815 and is characterized by a C-terminal globular domain (cullin homology domain) and a series of N-terminal repeats (cullin repeats).<sup>2</sup> Ohtake et al. (2007) characterize a fat-soluble ligand-dependent ubiquitin ligase complex in human cell lines, in which dioxin receptor (AhR) is integrated as a component of a novel cullin 4B ubiquitin ligase complex, CUL4B(AhR). Complex assembly and ubiquitin ligase activity of CUL4B(AhR) in vitro and in vivo are dependent on the AhR ligand. In the CUL4B(AhR) complex, ligand-activated AhR acts as a substrate-specific adaptor component that targets sex steroid receptors for degradation. Their findings uncover a function for AhR as an atypical component of the ubiquitin ligase complex and demonstrate a non-genomic signalling pathway in which fat-soluble ligands regulate target-protein-selective degradation through a ubiquitin ligase complex.<sup>3</sup>

#### REFERENCE

1. Zou, Y.; Liu, Q.; Chen, B.; Zhang, X.; Guo, C.; Zhou, H.; Li, J.; Gao, G.; Guo, Y.; Yan, C.; Wei, J.; Shao, C.; Gong, Y. : Mutation in CUL4B, which encodes a member of cullin-RING ubiquitin ligase complex, causes X-linked mental retardation. *Am. J. Hum. Genet.* 80: 561-566, 2007.
2. Tarpey, P. S.; Raymond, F. L.; O'Meara, S.; Edkins, S.; Teague, J.; Butler, A.; Dicks, E.; Stevens, C.; Tofts, C.; Avis, T.; Barthorpe, S.; Buck, G. : {and 41 others}: Mutations in CUL4B, which encodes a ubiquitin E3 ligase subunit, cause an X-linked mental retardation syndrome associated with aggressive outbursts, seizures, relative macrocephaly, central obesity, hypogonadism, pes cavus, and tremor. *Am. J. Hum. Genet.* 80: 345-352, 2007.
3. Ohtake, F.; Baba, A.; Takada, I.; Okada, M.; Iwasaki, K.; Miki, H.; Takahashi, S.; Kouzmenko, A.; Nohara, K.; Chiba, T.; Fujii-Kuriyama, Y.; Kato, S. : Dioxin receptor is a ligand-dependent E3 ubiquitin ligase. *Nature* 446: 562-566, 2007.

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