

Supplementary Material

Novel mutations in the asparagine synthetase gene (*ASNS*) associated with microcephaly

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Supplementary Figure 1. Conservation of amino acids in ASNS. Sequences were derived from the UniProt database (UniProtKB; Pundir et al., 2017; The UniProt consortium, 2017) and aligned using the Clustal Omega (1.2.4) multiple sequence alignment program implemented in UniProt. The following organisms were included: Human (*Homo sapiens*), Sumatran orangutan (*Pongo abelii*), Rhesus macaque (*Macaca mulatta*), Bovine (*Bos taurus*), Chicken (*Gallus gallus*), Mouse (*Mus musculus*), Rat (*Rattus norvegicus*), Chinese hamster (*Cricetulus griseus*), and Zebrafish (*Danio rerio*). Conservation: *(asterix) single fully conserved residue; :(colon) conservation between groups of strongly similar properties – scoring >0.5 in the Gonnet PAM 250 matrix; .(period) conservation between groups of weakly similar properties – scoring ≤0.5 in the Gonnet PAM 250 matrix (according to Uniprot; <http://www.uniprot.org>). Mutations described for ASNSD are given in blue, the mutations found in the family of this case report in green.

References

Pundir, S., Martin, M. J., & O'Donovan, C. (2017). UniProt Protein Knowledgebase. *Methods Mol Biol*, 1558, 41-55.

The UniProt consortium. (2017). UniProt: the universal protein knowledgebase. *Nucleic Acids Res*, 45, D158-D169.

