

## **CD163-L1 is a myeloid differentiation marker that is regulated by different inflammatory stimuli**

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We have identified and performed the initial characterization of a new type I transmembrane protein that is encoded by the *CD163-L1* gene. The *CD163-L1* encoded protein (CD163-L1) contains 12 extracellular scavenger receptor cysteine-rich (SRCR) domains, a transmembrane region and a cytoplasmatic region. *CD163-L1* is a gene duplication of the *CD163* gene that encodes the haptoglobin-hemoglobin receptor expressed by cells of the myeloid cell lineage.

We have raised a panel of monoclonal antibodies directed against CD163-L1. The specificity of the antibodies was confirmed by Western blotting of HEK293 cell expressing full-length recombinant CD163-L1 and by Triton X-100 extracts from placenta, colon and small intestine. CD163-L1 showed a molecular mass of 160 kDa in the unreduced state in both tissue and cell extracts. No cross-reactivity to CD163 was observed. The antibodies were used to investigate the tissue distribution of CD163-L1. Immunohistochemical analysis of paraffin embedded human tissues, showed that the CD163-L1 expression is restricted to tissue macrophages and possibly to a subset of dendritic cells, while neither lymphocytes or granulocytes expressed detectable amounts of CD163-L1. Analysis of macrophages in inflamed human tissues showed enhanced CD163-L1 staining.

We then analysed human monocytes cultured in the presence of M-CSF by quantitative real-time PCR. The *in vitro* monocyte-to-macrophage differentiation showed that the CD163-L1 mRNA was upregulated >30-fold during the differentiation, whereas subsequent activation of the *in vitro* differentiated macrophages by LPS/IFN $\gamma$  or IL4 resulted in an equivalent downregulation of CD163-L1 mRNA.

We conclude that CD163-L1 is as myeloid differentiation marker that is regulated by different inflammatory stimuli.